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CONSTRUCTIVE RURAL SOCIOLOGY

CONSTRUCTIVE RURAL SOCIOLOGY

BY

JOHN M. GILLETTE

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WITH AN INTRODUCTION BY

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PRESIDENT OF THE UNIVERSITY OF MINNESOTA

New Edition
Revised and Enlarged

UNIV. OF CALIFORNIA

New York

STURGIS & WALTON COMPANY

1917

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Set up and electrotyped. Published February, 1913
Reprinted July, 1913, September, 1914, March, 1915, September, 1915
New Edition Revised December, 1915
Reprinted March, 1916, October, 1916.
February, 1917

INTRODUCTION

Interest in the problems of rural life is wide-spread, but it is too generally uninformed. City people praise a life close to nature but avoid the life itself. Alarmists predict the early depopulation of the countryside. Optimists count upon macadamised roads, telephones, rural free delivery and moving-pictures at the school-house to make the farming population happy and contented. Despondent citizens predict a scarcity of food products and an early dependence upon Russia and the Argentine. Still others querulously ask why the urban unemployed refuse to accept large wages and a comfortable home as labourers upon the farms, or why the dwellers in tenements do not eagerly seek the soil and add to the national wealth.

There is a zeal for agricultural education. Experiment stations, colleges of agriculture, agricultural high schools are being multiplied, and even in the common schools agricultural subjects are being introduced. There is a deepening conviction that if only agricultural knowledge and skill can be widely distributed, and if the young can be given insight and enthusiasm for farming pursuits, our problems will be solved.

The demand for new forms of agricultural extension is growing. Farmers' Institutes are declared to be an outgrown device. It is insisted that experts must go to the farmers on their farms, that demonstration plots must be scattered throughout the countryside, that county agricultural advisers must be appointed to serve the farmers of the region.

Club women of town and city are concerning themselves with the life of women and girls upon the farm. To many the difficulty now is not so much to keep the boy on the farm

364693

as it is to make rural life worth while for the girl. It is proposed, therefore, to supply the house with the results of an inventive skill which heretofore has been employed almost wholly on the farm outside the dwelling. A more interesting social life for farm women, closer contact with neighbours and with the nearest market town, are being urged. The extension of information about home decoration, cookery, and other household arts is being made a part of agricultural education and University extension everywhere.

All these conflicting ideas, suggestions, devices, need the steadying of fact and of authoritative principles. What is to be the future of agricultural industry? Is it to be organised on a factory system with large farms under expert management, or will the typical agricultural unit be the small farm intensively cultivated by one family? Or will these two systems be combined in different ways in different parts of the country? How are questions of this kind to be determined? What are the influences at work? These are pertinent questions.

The purpose of this volume is to provide in a clear and untechnical way the fundamental facts upon which judgments about past development, present tendencies and future growth are to be based. This volume ought to increase interest in rural problems and to make that interest more intelligent. It is to be welcomed as an important addition to the literature of the subject. It brings together in compact and convenient form a mass of significant facts and it draws sane and careful inferences. Professor Gillette has shown a clear grasp of the subject and has given us a valuable book which will be welcomed not only in school and college, but by the general reader.

GEORGE E. VINCENT.

President of the University of Minnesota.

December, 1912.

PREFACE

Rural conditions are attracting widespread attention. Numerous articles and volumes dealing with country-life matters have appeared during the past few years. While many of the books issued are exceedingly useful hardly any of them could be considered a rural sociology. To consider together the various phases of the life of the rural community and so to organise and present them that they shall convey a knowledge and appreciation of the problems of country life is surely a useful undertaking. The present modest volume is an attempt to do this.

The writer's interest in rural matters was first aroused by Professor Charles R. Henderson's course on "Rural Communities" at the University of Chicago in 1900. A course of lectures entitled "North Dakota Sociology" was offered students of the University of North Dakota in 1908. But in order to interpret many local conditions a larger comparative study was necessary. This larger undertaking furnished the foundation for the present volume.

In this volume it is sought to define the scope of rural sociology, to differentiate between rural and urban communities, to distinguish the types of rural communities in the United States and to indicate the physical and social influences which have produced them, to consider the movement of population from country to city and the nature of the moving conditions, to compare the advantages of country and city, to mark out the nature of the rural problem, to consider the improvement of agriculture, farm marketing, farm labour, and the farm home so far as they concern rural community welfare, and to take an inventory of social institutions and indicate how they may be improved.

The aim of the author is primarily to supply a text on rural sociology that may be used in universities, colleges, agricultural colleges, and normal schools. The attempt has been made to give the facts and conditions of country life a broad sociological interpretation. Much valuable concrete data has been suppressed in order that principles might be prominent. It is hoped, however, that the style is sufficiently simple and direct to render the volume available for general purposes. In fact the writer has written "Constructive Rural Sociology" with the desire to reach the intelligent farmer as well as the teacher or student.

A criticism as to the scope of the text may arise relative to certain portions of chapters 7, 8, 9, and 11. It may be alleged that matters are treated which belong to economics, agriculture, and to sanitary and mechanical engineering. Technically such a criticism may be just. It is lessened by practical considerations, however, for many institutions in which instruction in rural matters is desired may not offer separate courses which develop those subjects in a specialised manner; or more general readers may not have facilities for informing themselves relative to them. It seemed best, therefore, to make a somewhat comprehensive survey of the improvement of agriculture, the home, marketing, and sanitation. Moreover the attempt has been made in each case to give the subject a sociological bearing. But if the proper sociological limits have been exceeded, good precedent for the excess exists. For Professor Carver has embodied in his "Principles of Rural Economics" considerable material of a sociological nature.

In the nature of the case I am indebted to many writers for the material embraced in most portions of the study. Full acknowledgment of this by references throughout the work has been made. I am accountable for the organisation of the material and for the plan of the work. The chapters which are peculiar to this work will be discovered by crit-

ical students in due time, and will stand or fall, according to their merits; as indeed will the whole volume.

I desire especially to thank my colleague, Assistant Professor Meyer Jacobstein of the department of economics, for valuable suggestions, Mr. George R. Davies, teaching fellow in sociology in the University of North Dakota, who has performed the exacting work of making the index, and President George E. Vincent of the University of Minnesota who kindly consented to write the introduction.

JOHN M. GILLETTE.

University of North Dakota,
December 6, 1912.

PREFACE TO THE SECOND EDITION

The first edition of this volume received a welcome throughout the nation, both on the part of teachers of rural subjects in institutions of higher learning and by the general public, that was beyond the author's expectations. In the nature of the case some valuable criticisms and suggestions for its improvement have appeared which have been taken advantage of in the present edition. Many changes and additions in the subject-matter have been made in the work as a whole, the statistics have been brought down to date, new sections have been added in certain chapters, and two new chapters have been written. The treatment did not seem complete without some consideration of the physical conditions of the United States in their relation to agriculture. Chapter III appears as a means of filling in this gap. Since the original pages were written, the subject of rural credit has assumed a position of importance in academic and public notice. Accordingly, a short chapter has been prepared on that topic.

It may not be amiss to allude to the new results which I have worked out and which appear in the chapter on Rural and Urban Increase, under the discussion of Rural Migration. The results alluded to refer to the question, How much does rural migration contribute to the growth of urban communities?

The author of this work has repeatedly sought to answer this question and has published results several times, none of which, unfortunately, were correct, as the present demonstration shows. Only one other investigator has published results which bear on the question, although it is well known

that many others have attempted to meet the problem. Since there is such widespread assertion that city populations grow at the almost entire expense of the country it is important to get the matter settled. Not until now has a satisfactory and reliable method of reaching a solution of the problem appeared. With this method before him the reader has it within his power to test the results for himself.

There is, however, one criticism which grew out of an inadvertent passage in the preface to the first edition which I desire to dispose of. I stated there that my first interest in rural matters arose as a result of attending a course of lectures by Professor Henderson on Rural Communities at the University of Chicago. The conclusion which one writer drew and to which he gave wide publicity through the columns of a prominent weekly journal was that this was the first knowledge I had of farm life and that, therefore, the volume I wrote must be the work of an amateur in agricultural matters. It is not necessary that a writer should defend himself against such a charge. It is better to permit the reader to judge that matter after duly considering the contents and work.

If a justification is necessary for having written on the subject of rural sociology it might be well to allude to my experience with farm life. It has been my fortune to have lived a year or more in each of six of the nine geographical divisions, or in twelve different states distributed throughout the nation from Massachusetts to California and from Arkansas to North Dakota. My rural origin made it inevitable that many of the methods and conditions of the different communities should have made an impression on me. Thus the facts of seasonal labour came up out of a somewhat unconscious reservoir. In later years my summers have been spent on a farm in a frontier community and during the year I have attended and lectured at various farmers' meetings.

Probably no one is more sensible to the shortcomings of this work than is the writer. Additional topics and many new phases of those already treated might well receive consideration. But this must always be so where much is attempted within a small compass. To enlarge the book very much beyond its present size would place it in the class of reference works and make it unavailable as a text and handy volume. However, it is believed that the volume now has reasonable fulness and completeness and will fairly well meet the requirements of both teachers and interested readers.

JOHN M. GILLETTE.

University of North Dakota,
October, 1915.

CONTENTS

PAGE

INTRODUCTION v

PREFACE vii

PREFACE TO THE SECOND EDITION xi

CHAPTER

I. MEANING AND IMPORTANCE OF RURAL SOCIOLOGY . . . 3

II. DISTINCTION BETWEEN RURAL AND URBAN COMMUNITY 9

III. PHYSICAL CONDITION OF THE UNITED STATES AND AGRICULTURE 22
I. Influence of physical environment in general . . 22
II. Physiographic features of the United States . . 27
III. Agricultural responses to physical conditions . . 34

IV. TYPES OF COMMUNITIES AS RESULTS OF THE DIFFERENTIATING EFFECTS OF ENVIRONMENT 48
I. Pure agricultural type 49
II. The mixed-agricultural type 53
III. Frontier or pioneer type 54
IV. Irrigation communities 56
V. Rural immigrant communities 64
VI. Backward communities 73

V. RURAL AND URBAN INCREASE 78
I. Facts as to drift to cities 78
II. Sources of city growth 85
III. Significance and causes of migration to cities . . 94

VI. THE SOCIAL NATURE OF THE RURAL PROBLEM 101

VII. ADVANTAGES AND DISADVANTAGES OF FARM LIFE . . . 111
I. Advantages 113
II. Disadvantages 128

VIII. IMPROVEMENT OF AGRICULTURAL PRODUCTION 135
I. Sociological implication of agriculture 135
II. Practical importance of problems of production . 138
III. Illustrations of gains from science applied to agricultural production 142

IX. IMPROVEMENT OF THE BUSINESS SIDE OF FARMING . . . 154
I. Farm management 154
II. Farm marketing 162
III. Benefits of organisation 167

CHAPTER		PAGE
X.	IMPROVEMENT OF THE BUSINESS SIDE OF FARMING (CONTINUED) — RURAL CREDIT	176
XI.	IMPROVEMENT OF TRANSPORTATION AND COMMUNICATION	191
	I. Social and economic aspects	191
	II. The improvement of roads	197
XII.	SOCIAL ASPECTS OF LAND AND LABOUR IN THE UNITED STATES	204
	I. Available land and possible population	204
	II. Tendency in size of farms	211
	III. Tenant farming	215
	IV. Farm labour	225
XIII.	RURAL HEALTH AND SANITATION	235
	I. General considerations	235
	II. Sanitation in the home	238
	III. Neighbourhood sanitation	249
XIV.	MAKING FARM LIFE MORE ATTRACTIVE	256
	I. Farm buildings	258
	II. Improvement of the utilities of home and farm	260
	III. Improvement of grounds	268
XV.	SOCIALISATION OF COUNTRY LIFE	272
	Meaning of socialisation	272
	The fact of backwardness	273
	Desirability of associational life	276
	Direction rural socialisation should take	283
XVI.	RURAL SOCIAL INSTITUTIONS AND THEIR IMPROVEMENT	288
	Clubs	288
	Farmers' organizations	295
	Library	301
XVII.	RURAL SOCIAL INSTITUTIONS AND THEIR IMPROVEMENT (CONTINUED) — THE CHURCH	310
	Function	310
	Principles regulative of what it may undertake	312
	Decadence	316
	Methods of improving	320
	Y. M. C. A.	322
XVIII.	SOCIAL INSTITUTIONS (CONTINUED) — ADJUSTMENT OF EDUCATION TO RURAL NEEDS	327
	Sociological demands	327
	Rural schools	330
	Higher education	350

CHAPTER		PAGE
XIX.	RURAL CHARITY AND CORRECTION	363
	I. Conditions in the country	363
	II. Improvement of charitable and corrective institutions	368
XX.	RURAL SOCIAL SURVEYS	380
	I. Importance of the survey	380
	II. Nature of the survey	384
	INDEX	393

CONSTRUCTIVE RURAL SOCIOLOGY

UNIV. OF CALIFORNIA

CONSTRUCTIVE RURAL SOCIOLOGY

CHAPTER I

MEANING AND IMPORTANCE OF RURAL SOCIOLOGY

Scope and Meaning.— Rural sociology has as its particular task to take a full inventory of the conditions of life in rural communities. It must discover their tendencies and deficiencies, map out the special problems, and indicate ways of betterment according to the best ideals of social life. It is not, therefore, a mere dilettante study. It seeks to be useful. Its aim is to be practical, in the sense of organising information with a view to throwing light on a given situation. It has shortcomings because the field is new and not yet thoroughly organised, and because many phases of it are yet to be explored and charted. A study of rural life such as is here made, while it may settle nothing absolutely, may still entitle us to hold an opinion or conviction, and may even lead the way to a right policy and useful action.

The task of rural sociology being to consider the subject in its wholeness and to consider special features with a view to determining their influence upon rural life as a whole, rural sociology is by that differentiated from other rural studies, such as rural economics, for instance. The latter study would seek to discover the best methods of conducting rural matters in order best to advance business and to make wealth. It regards the wealth motive, and places it in the center of its considerations. It asks "Does this way or that

way most conduce to wealth production?" When it has found out, it advocates pursuing that special way. Rural transportation, for instance, interests the economist because it is necessary to carry on the economic activities of farming. It interests the sociologist because it is a means of communication, of social intercourse, of raising the satisfaction of life. The economist and the sociologist treat the same things frequently, but there can be no conflict so long as each keeps his legitimate aim directly before him.

The same remarks apply to the political scientist and sociologist, to the historian and sociologist, and to all other special social scientists and the sociologist.

Just what the social problems of rural community life are we shall determine when we come to treat the special problems of social life. We shall there seek to locate the problems, to outline them, and to discuss them as fully as possible.

The Importance of Rural Sociology.— The commanding attention which at the present time is being devoted to rural problems and which is roughly and loosely called "rural sociology" is one of the best proofs of the importance of rural sociology. Value is a social product. Things are valuable more or less according to the strength of people's appreciation of them and desire for them. If a subject occupies the public mind it is valuable for the public to the extent of its pressure. Whether it is of permanent value depends on its inherent power to compete with other issues. We must grant to rural sociology at least a very large temporary importance.

Besides the foregoing evidence of its current importance several additional reasons may be given as an indication of its more permanent value.

The Importance of Agriculture.— Our nation is becoming less and less agricultural as measured by the proportion of persons engaging in that pursuit. From this it might seem that agriculture is becoming less important. However,

when it is observed that all our inhabitants depend on the products of the farms and that population tends to overtake the amount of food a given territory produces the opinion arises that agriculture may become increasingly important to a nation. When it is further observed that the quality of life of an economic class is likely to be determined by the income, and that the intelligence and culture of the farming portion of the nation is dependent on its productivity; and that even the quality of life of all the people of the nation may be dependent on or affected by the cost of food, which in turn is determined by the quantity our farmers are able to produce ultimately, the subject gains a still larger importance.

Attention is being devoted to this subject. As an example of current consideration Mr. James J. Hill may be cited. He estimates that the population of the United States will be 117,036,229 in 1920, 142,091,663 in 1930, 170,905,412 in 1940, and 204,041,223 in 1950.* He emphasises the fact that this colossal population will be witnessed within the coming generation. "Therefore, and this is the focal point of the whole matter, the country is approaching the inevitable advent of a population of 150,000,000 or 200,000,000 within the lifetime of those now grown to man's estate, with a potential food supply that fails as the draft upon it advances. How are these people to be fed?" [1]

The general social significance of agriculture to the nation he notes in these words: "A prosperous agricultural interest is to a nation what good digestion is to a man. The farm is the basis of all industry. The soil is the only resource that renews itself continually after having produced value. I do not wish to belittle the importance of manufacture or its relative value in general growth. But for many years this country has made the mistake of unduly assisting manufacture, commerce, and other activities that center in cities,

[1] "Highways of Progress," Chap. 1.

* This is an overestimate which will be considered later.

at the expense of the farm. The result is a neglected system of agriculture and the decline of the farming interest. But all these other activities are founded upon agricultural growth of the nation and must continue to depend upon it. Every manufacturer, every merchant, every business man, every good citizen is deeply interested in maintaining the growth and development of our agricultural resources." [2]

But that America will be able to meet future exigencies for food production can scarcely be doubted. The signs of this are given in the statement of the Secretary of Agriculture.

"A demand that is more difficult to fulfil in production per acre is for an increase that equals or exceeds the actual increase of population, including the immigrants and the temporarily high birth rate of the foreign born. But, notwithstanding the fact that this difficulty is greater in the United States than it is in all other countries that have practically ceased to take much new land into cultivation, many of the states of this nation are each maintaining an increase of production in the case of one or more prominent crops that is greater than the actual increase of population. Ten states are doing this in the case of corn; for wheat the number is 22; for oats, 16; and for hay, 25." [3]

The Importance of Rural Social Problems.— Much that is said about country life is entirely economic. It is not difficult to get statistics of wealth and to determine the backwardness of tillage, or of stock-breeding. But there is a larger aspect of country life which can hardly be put statistically, although statistics may give some indication of the drift of things. The quality of life on the farm; the happiness and contentment which are the bone and sinew of well-being of the individual and society; the intellectual outlook on life which determines whether or not the individual and his class

[2] Same, pp. 45–6.

[3] Report of the Secretary of Agriculture, 1910, p. 28.

will take part in progress or be the objects of exploitation; the relation of the farmers as a class to other classes, and hence the ease or difficulty of securing coöperation for larger community purposes; all these suggest problems and issues which are not immediately economic, political, religious, but which are primarily social.

Usefulness to Rural Inhabitants.— Living creatures have always contended with the environment in extracting their living from it. The more they have come to understand it the better they have been enabled to use it for their advantage. Men are finding this true of their social environment. Society is a complicated affair which is not easy to understand and to manage. Rural communities, as simple as they seem, have complexities and hidden meanings for the average man and woman. A large part of the backwardness, narrowness, and unhappiness of country life arises from a lack of comprehension of the conditions of the community and of the relation of the neighbourhood to the larger world.

Such a consideration of the various phases of rural life as rural sociology gives should be of immense value to the farmer, to the rural teacher, and to the country preacher and physician because of the light it throws on familiar conditions. If knowledge is for adjustment purposes, a comprehension of things about them should make the lives of rural inhabitants better adapted, fuller, and, consequently, happier.

Importance to the Nation as a Whole.— The whole nation should be interested in the condition of every fundamental part of the nation. We are greatly concerned over the problem of the poor, the criminals, and the defectives because we are certain that these classes are dangerous to the larger welfare. It has never been duly appreciated that there are conditions in the life of the farming population which are important to the total life of the nation or the state. But if the former classes are able to poison the larger life, any backward condition or defective structure of such a dominant

and fundamental class as the rural inhabitants must act of necessity as a deterrent.

Progress is secured by means of those equitable and distributed changes in a state or society which secure the right adjustment of each part to the whole organised life and permit none to be exploited by others. The farmer's advance does not mean others' injury, but his progress in all good things will contribute to the general upbuilding. His advance means the promotion of the common good. His better education means the intellectual enrichment of all other classes. His improvement in leadership so that he is competent to take care of his interests in county, state, and nation will bring about a revolution in political life which will offset the undue influence of special privilege in government. If the cities are corrupt and hold the balance of power for evil, as some would contend, an enlightened and strengthened agricultural vote would act as a countervailing influence.

Says ex-President Roosevelt: "Our civilisation rests at bottom on the wholesomeness, the attractiveness, and the completeness, as well as the prosperity, of life in the country. . . . Upon the development of country life rests ultimately our ability, by methods of farming requiring the highest intelligence to continue to feed and clothe the hungry nations; to supply the city with fresh blood, clean bodies, and clear brains that can endure the terrific strain of modern life; we need the development of men in the open country, who will be in the future, as in the past, the stay and strength of the nation in time of war, and its guiding and controlling spirit in time of peace." [4]

We may affirm, then, that it is a matter of general concern to consider the conditions of rural life with a view to applying our best ideals to it, to understanding it, and to coöperating with it for its advancement and the promotion of the common good.

[4] Report of the Country Life Commission, p. 9. Sturgis & Walton Co.

CHAPTER II

DISTINCTION BETWEEN RURAL AND URBAN COMMUNITY

Difficulty of Making the Distinction.— It may seem absurd to raise the question of what constitutes a rural community, and what differentiates the rural from the urban community. The common man is likely to feel positive that he knows what the city is, what the country is and what distinguishes each from the other. It appears preposterous that we should not know when we are in the country or in the city and exactly where the boundary line is which separates them. In reality this is very much like the assurance of the popular mind that a man knows himself, his nature, his constitution. For would it not be ridiculous to think that one could live with himself so long without coming to a ripe knowledge of himself? However, to the student of various lines of sciences few things are more familiar than that common facts may prove hard to distinguish and to define for scientific purposes.

The difficulty of drawing hard and fast lines between domains appears in classifying the sciences. For example, it is not easy to differentiate between certain phases of history and political science, or between history and economics. The distinction between the sciences rests on the aim and interest of the scientific worker. Investigators of the different sciences often handle the same objects and matter. But since they have different interests to serve they gain different ideas from considering the same things and build distinct systems of knowledge as a consequence. A science is built on the foundation of a particular point of view.

Likewise it is conceivable that what would be a city for some intellectual purposes would not be for other purposes. The same is true for the country. There are some aggregations of populations, however, which could never serve as country and some country regions which could never serve as city. We may at least refuse to be surprised if the task of distinguishing the city from the rural community should develop difficulties.

Distinction Based on Population.— Census takers and statisticians group populations under the headings of urban or city and rural or country. This has been done in the United States at each decennial census since the first one in 1790.

Until recently cities composed only those aggregations of population having at least 8,000 inhabitants. But it was perceived that smaller aggregations contained essentially urban conditions. Hence the census of 1900 makes three classes of population: (1), urban, places of 4,000 or more people, together with 1,158 New England towns which have been taken to represent the urban element; (2), semi-urban, 9,553 incorporations having less than 4,000 inhabitants and more than 2,500; (3), rural, or purely country region, including villages and small centres of population of less than 2,500 people. The census of 1910 accepts and uses the 2,500 limit as the boundary line between the districts it considers rural and urban.

Distinction Based on Function.— Definitions of the city have been made by writers which have been based on abstract specialness of the activity taken into consideration independent of its concrete content; and also, by more careful writers based upon definite, determined and concrete activities, and notably certain industrial activities. Thus Adam Smith said:[1] "Cities are inhabited chiefly by artisans and tradespeoples." Sombart said cities are "aggregations of men dependent upon the products of outside agricultural labour for

[1] "Wealth of Nations," Bk. III, Chap. 3.

their subsistence." Both of these ideas are true only of modern cities. Agriculture has held a definite place in certain cities and centres.

The cities of ancient times were generally consumption cities, even the greatest of them. The history of the localisation of industries shows that industrial activities are relative to place and time. But in modern times, and especially in advanced nations, the functional characteristics are large factors in distinguishing municipal communities. They are largely what Smith and Sombart said: aggregations of artisans and tradespeople who are dependent on outside agriculture for subsistence.

This is defining the city in terms of the function of the inhabitants rather than in those of the city itself. It is quite possible to conceive the city in its collective aspect to possess and exercise functions which the rural community does not have. The city undertakes to do many things which are left to the citizen in the country. Water, light, drainage, sewage disposal, parks, etc., are a few of the distinctly city undertakings. These are, however, special undertakings mostly of modern times.

Distinction Based on Social Mediation.— One of the essential distinctions between city and country lies in the difference in the degree to which their inhabitants depend on the existence of social machinery as a transmitting agency in their business. The farmer produces to make a living and follows a business which is extractive in nature. His materials are first degree materials. He deals with nature and her resources directly, without the mediation of others. City dwellers, on the other hand, in prosecuting their business activities and in so far as they handle material goods, deal with nature indirectly. What they work up is in the second, third, or a greater degree removed from its original form. It has been shaped up and handled by other agencies. A vast array of social organisation stands in between them and

its source in nature. The material the urbanite works upon and the goods he consumes are thus mediated to him by way of this social mechanism.

To say this is not to ignore the fact that the farmer of to-day is also dependent on social organisation for obtaining the tools and implements he uses in production. Nor is it to deny that the modern agriculturist produces for the world at large rather than for himself; in the sense that what he produces is consumed by others rather than by himself. In fact he consumes a minimum of what he produces, and, generally, this little is worked upon and refined by others in society and returned to him in another form for consumption. Originally the farmer produced about everything he used. The household was almost self-sufficing. But the modern transportation and industrial system has placed him in contact with society and made him dependent on it as a producer and consumer.

Distinction Based on Associational Life.— We have to-day a simple terminology to classify communities according to their simplicity or complexity; namely, farm, village, city. Historically the growth into city life has been first family, then horde or clan, the members of which lived together, possibly in a communal house and composed of a set of related families. This presents the urban community of about the simplest type or is the beginning of the village. Later came the city with its aggregation of unrelated families, yet having a unity of its own arising out of the necessary interdependence.

To-day we can see that the city is a complex thing. It is a complexity of occupations, of trade groups and professional groups, of social structures with their accompanying functions. In this aspect the city is a social fact, that is, it is a complex community composed of a number of secondary groups. This associational life not only registers a much intenser complexity than rural life in the matter of groups,

but it has certain accompanying interests which give it a characteristic mark of its own.

It has been asserted that the place to begin to find the differential between social groups and to establish the right point of view for the comparative psychology of contemporaneous as well as of primitive aggregations is a study of the occupations. This is held to be obvious because they reflect the condition of mind brought on in an attempt to strike a proper and fruitful adjustment to the environment. As a consequence a consideration and comparison of the occupations of urban and rural regions might reveal the psychical traits and marks peculiar to each. Says Professor John Dewey, "Occupations determine the fundamental modes of activity, and hence control the formation and use of habits. These habits, in turn, are something more than practical and overt. 'Apperceptive masses' and associational tracts of necessity conform to the dominant activities. The occupations determine the chief of satisfaction, the standards of success and failure. Hence they furnish the working classification and definitions of value; they control the desire processes. Moreover they decide the sets of objects and relations that are important, and thereby provide the content or material of attention, and the qualities that are interestingly significant. The directions given to mental life thereby extend to emotional and intellectual characteristics. So fundamental and pervasive is the group of occupational activities that it affects the scheme or pattern of the structural organisation of mental traits. Occupations integrate special elements into a functioning whole." [2]

The hunting group or stage of primitive society illustrates this principle. The dominant pursuit of the chase stamped itself so deeply upon the primitive social structure that it dominates lines of attention and reaction, along with many incidental interests. Further, the methods and ways of reacting

[2] *Psychological Review*, 9: 217 ff.

become a part of social heredity and manifest themselves in our current civilisation.

Now if we should seek to apply this point of view to the matter in hand we doubtless would obtain important results. The fact will be treated later that individualities are the outcome of industrial and occupational activities and specialisations. Here we are interested in the obverse side, that the group which centres about some objective interest gets its community individuality transformed.

Distinction Based on Density of Group Living Within a Definite and Given Area.— Every community has a certain localisation. Even a tribe or a clan, which are more or less personal aggregations, are localised, though not strictly nor so essentially as incorporations. A rural community may be and generally is localised. But the essential difference between the city and country in this respect is that the city is a community which, relative to its human contents or density, occupies an especially limited area. To be sure, there are no absolute limits to this. The density and size of cities vary greatly. Whether there is to be a limit to the size of cities there is a bound to their density beyond which they cannot pass. Says Bookwalter, "The marked characteristic that distinguishes these two groups, so innately different in nature, is the capacity of the one for unlimited growth and development, and the want of a like power of indefinite expansion in the other." [3] The groups spoken of are "those essentially distinct and different groups of labour which naturally generate from the collection of a given number of agricultural units into the concrete form of a village or town." [4]

The average density of open country regions in the United States differs from section to section and state to state. In New England and the eastern states generally a square mile is likely to contain from 20 to 175 inhabitants. In the more

[3] "Rural Versus Urban," p. 55. The Knickerbocker Press, N. Y., 1910.
[4] *Ibid.*, p. 54.

western states it may contain from one to four or five families, and in some new states the population is even less than this.

On the other hand, city density may run very high, and generally goes into the thousands per square mile. Thus New York County, New York, in 1900, contained 2,050,600 inhabitants in an area of 63 square miles, which was a density of 32,200. This density is produced by New York City, much of which lies in New York County. Chicago has a much less density. It is fairly well coextensive with Cook County, Illinois. In 1900 that county had a population of 1,838,735 persons. Its area was 993 square miles. The density was, therefore, nearly 1,852.

Distinction Based on the Character of the Problems Arising in the Community.— Whether or not the difference in communities based on a distinction between the problems and issues arising for solution is fundamental, it is at least important. It seems to be quite as fundamental as the distinction based on differences in density. Density is only a fact, although it may be a cause of problems and issues. But differences in density in itself is not a primary cause of such phenomena. Problems and issues which modern cities have to face are facts, and as such may be considered more or less relatively distinguishing characteristics. Some of these modern problems and issues are connected with congestion of population, water supply, light, sewage disposal, sidewalks, pavements, maintenance of parks, libraries, and theatres, industrial disturbances such as strikes and lockouts, misgovernment in the shape of the industrialisation of government or politics, and other phenomena.

Not all of these are entirely peculiar to the city. As we shall see later, the water supply may be menaced in the country, although it seldom calls for collective action. Roads in the country correspond to pavements in cities, though the problem is generally less intense and imperative. Libraries

may come to be considered as essential to country life as to city, as also may some form of amusement and recreation corresponding to the theatre. Strikes and lockouts, calling for community interference have been quite foreign to rural regions, though "larger farming" seems to be developing them. Misgovernment has often afflicted the latter, yet by reason of local lethargy and indifference, or because of boss and machine domination, rather than because of the projection of special interests into politics.

In some cases, then, it appears that the distinction is nearly absolute, while in other cases it is one of degree.

Distinction Based on Types of Individuals, or of Individuality Developed.— The industrial, commercial, and professional specialisation which is carried on so extensively in modern cities has created types of individuality which are peculiar to these modern aggregations. If character and qualities are the outcome of habits, and if habits are the outcome of reactions to particular environments, it is evident that there is a vast difference between the habitual reactions and points of view of city and country people. "Not only is language a group matter, but the range of thoughts possessed and used by any group is limited, and characterises one group in distinction from another. The teacher impresses his mind on the school, the father on the family, and the family or school becomes an intellectual group by itself. . . . Only members of the same group can really understand each other. The same holds true in different ages." [5]

There is a decided differentiation between rural and urban inhabitants in this respect. Thus we may say that the type in the country is simple and generally single. We have a farmer type based on agricultural interests and growing out of adjustments to those interests. In the cities, as we have seen, there are diverse occupations and vocations. Thus there are the professions, the various forms of commerce and

[5] Fairbanks, "Introduction to Sociology," p. 105.

trade, and the many kinds of industry and skilled activity. Each of these has its centre of absorbing interest and content of information about the interest involved; and it has its habits and reactions which are moulded into a type to correspond to the calling. These various types constitute the more complex individualities of urban communities.

We are not dealing with ultimate things in this discussion. For practical and psychological purposes these individualities differ from each other in obvious ways. It is common knowledge that the individuals of these types do not easily mix in a social way. It is difficult for them to keep up an extended conversation with each other. Their ideas are about different ranges of facts, and their points of view do not harmonise. Habits and standards of living diverge. Hence, the consciousness of kind between types is pale and diffused.

Distinction Based on Collective Mind.— The collective mind is a different concept from the individual mind. We may know, somewhat approximately, what to expect of individuals acting separately in given circumstances. What the collective action, emanating from the same individuals constituted as a crowd, would be is more difficult to predict. It is probable that density of population, the congregating of nationalities and races, and the cultural stimuli, to be found in cities, are factors which might be expected to produce a type of collective mind that is distinct from that of the open country.

Whether city or country is more prone to mob-mindedness is a pertinent consideration. This has been discussed by Giddings and Ross.

Ross says: "It has long been recognised that the behaviour of city populations under excitement shows the familiar characteristics of the mob, quite apart from any thronging. Here we get unanimity, impulsiveness, exaggeration of feeling, excessive credulity, fickleness, inability to rea-

son, and sudden alternations of boldness and cowardice. Here, indeed, are the chief counts in the indictments which historians have drawn against the city democracies of old Greece and mediæval Italy." All this is made possible by means of the easy communication of individuals, the quick contact of mind with mind, and manifests itself in booms, panics, strikes, mobs, and speculative manias. On the other hand, Giddings calls attention to the greater excitability of country populations. He says, "There have been scenes of wild violence in Paris and London; there have been draft and other riots in New York City; but the collective violence in all the great cities of Europe and America for two hundred years would not make a great comparison with the epidemics of emotion — accompanied by dancing and other manias — that surged through rural communities in connection with the great revival movements under the Wesleyans, the later revivals of 1837 and 1857, the insurrections like Shay's Rebellion and the Whiskey Rebellion, the Ku Klux Clan outrages, the Vigilance Committee activities, the conflict between Gentiles and Mormons, the White Cap outrages, and the lynchings in our Western and Southern states." [6]

The truth is likely to lie in the statement that the more heterogeneous the population of the cities becomes the less are they beset by mob-mindedness, whereas the homogeneity of rural populations makes them susceptible to certain forms of mental manias and violent manifestations under given conditions. It can hardly be held that our Northern and Western communities of the agricultural sort offer many or intense manifestations of the mob spirit.

Other Distinctions.— It is not impossible that still other differences between city and country may be made, but they are likely to be of minor importance. One difference that has been suggested is based on the assumption that in cities the work places are nearer the houses of the workers, than are

[6] Ross, "Social Psychology," pp. 58–60.

those in the country. This assertion is difficult to prove or to disprove absolutely, but its truth is not of the self-evident variety. Probably the workers in small centres travel a shorter distance to their work than do the tillers of very large farms. On the other hand ordinary acquaintance with both city and country life makes it evident that the majority of people living in large cities travel much farther than does the tiller of an average sized farm. The average number of acres in a farm in the United States in 1910 was 138.1.[7] This would mean a farm considerably less than one-half mile square. Conceiving that the farms are usually square in form and the homes somewhat centrally located it is apparent that the average farmer's work lies within half a mile of his home.

Added to this is the fact that out of a total urban population of 42,623,386 in 1910, 34,153,034 persons lived in cities of more than 10,000 inhabitants.[8] The preponderating number of such cities are several miles square, and it is evident that the average worker must travel much farther than the average farmer to reach his work.

Another distinction which has been suggested is that the size of the producing unit in town and country differs. This means that the number of persons who on the average, or characteristically, are employed by one person or firm is less for the rural regions than for urban districts. We find that in 1910 there were in the United States 10,755,790 rural families, and on the average 4.6 persons to a family and 4.7 persons to a dwelling.[9] At the same time there were 6,361,502 farms,[10] although there were 10,551,603 rural dwellings. But since 8,118,825 persons living in incorporated places of 2,500 inhabitants and less form a part of the rural population, and since there are 4.7 persons to a rural

[7] Abstract Thirteenth Census, p. 271.
[8] Same, p. 59.
[9] Abstract of Thirteenth Census, p. 260.
[10] Same, p. 265.

dwelling, 1,727,409 such dwellings would be found in this part of the rural population. There would, therefore, be 8,824,194 farm dwellings on the 6,361,502 farms. But since a farm for census purposes consists of "all the land which is directly farmed by one person managing and conducting agricultural operations, either by his own labor alone or by the assistance of members of his household or hired employes," [11] it is clear that one farm may contain more than one dwelling. However it is likewise evident that, on the average, the farm unit employs few persons.

Some idea of the producing unit in cities may be obtained from statistics of industries. In continental United States there are 270,082 manufacturing establishments which employ 7,432,099 persons. Thus in such industries there are 23.8 employes on the average for each producing unit. There are engaged in mines and quarries, 27,260 plants, employing 6,139,980 persons, an average of 41.8 persons per producing unit. From these examples it may be seen that urban producing units employ more persons than do rural units.[12]

Conclusion.—A recent writer, in an effort to define the city in its essential and historical characteristics, has emphasised the morphological characteristics as the true line of demarkation. His definition is interesting. It is this: "The city then is a complex community of which the geographical localisation is especially limited in relation to the city's size (volume), of which the amount of territory is relatively small with reference to the number of human beings." [13]

That is, the morphological qualities are the ones which historically have distinguished city and country. This complexity consists in the increasing association and multiplica-

[11] Abstract Thirteenth Census, p. 265.

[12] Same, pp. 438 and 541.

[13] René Maunier, "The Definition of the City," *Amer. Jour. Sociology*, 15: 545.

tion of groups of social elements within a restricted area. But since our purpose is limited to a consideration of modern communities only, we are not bound by this historical distinction, however true to fact it may be. We are obliged to take into consideration all the observable peculiarities which mark off one community from the others.

Probably all of the things we have mentioned must be taken into account in determining the line of demarkation between urban and rural communities. Without question the complexity of interdependence of functions of the individuals and groups which constitute cities, together with the peculiar character of those functions, lie at the centre of any attempt to establish a criterion of cities, and vice versa, of the country districts.

REFERENCES

Bookwalter. "Rural Versus Urban," Chap. 4.

Smith, Adam. "Wealth of Nations," Bk. III, Chap. 3.

Dewey, John. "Interpretation of the Savage Mind," *Psychol. Rev.*, 9:217–30.

Fairbanks, Arthur. "Introduction to Sociology," Chap. 5.

Maunier, René. "The Definition of the City," *Amer. Jour. Soc.*, 15:536–49.

Twelfth Census. "Population," Vol. I:lxxxi and lxxxix.

"Abstract of Twelfth Census," p. 100ff.

Ross. "Social Psychology," pp. 28–30, and 224–30.

"Abstract of Thirteenth Census."

CHAPTER III

PHYSICAL CONDITIONS OF THE UNITED STATES AND AGRICULTURE

There is such a close connection between life and environment, between community prosperity and physical conditions, that a rural life study must take account of the fact. Rural life and rural communities are obviously not less dependent on topography, soil, and climate than are other forms of society. An attempt will be made in this chapter to develop a background on which to project the relationship, to portray the essential physical conditions which obtain in the United States, and to indicate the response which agriculture makes to those factors.

I. INFLUENCE OF PHYSICAL ENVIRONMENT IN GENERAL.

Moulding Force of Nature.—All life rests on a physical basis. The lowest forms of life are bound to one location and the dependence on that immediate spot for the satisfaction of all their wants is absolute. The little space they occupy furnishes everything they consume. With the evolution of higher and higher forms of life dependence on the immediate locality grows less by reason of the development of locomotion and intelligence. But no organism ever transcends the limitations imposed upon it by the conditions of habitat, climate, and food. Even man as "master of creation" does not rise superior to them and what he does is regulated by them.

What is true of individual plant, animal, and human bodies is applicable to the life of communities. The earliest human communities were limited by the physical conditions of nar-

row regions. Famine, flood, or fire might destroy a group by wiping out its local protection and food supply. With the gradual development of invention a larger territory could be drawn on for resources. When rapid communicating devices were established, accompanied by a more refined altruism, the food and comforts of all the world might become available in times of distress. But ultimately all communities, including rural districts, are dependent on nature for supplies, especially for food.

Modern society yields many examples of this rule. The great river valleys, rich in alluvial soil and benign in climate, together with favourable plateaus, constitute the granaries of the world and lie at the basis of civilised attainments. The distribution of the population of the United States or of Russia is a testimony to this. Altitude in itself may not indicate that a soil is infertile, but high altitudes are commonly unfit to support life for various reasons, such as the prevalence of a low temperature, rarity of the atmosphere, dearth of moisture, and poor quality of soil. Thus in the United States the average altitude is about 2,500 feet above sea level. Over three-fourths of the population dwell below an altitude of 1,000 feet, and more than nine-tenths live below that of 1,500 feet. This may be changed in the future, but these facts speak plainly to the effect that people have depended and do depend on the more habitable areas.

Modern peoples seek the milder regions, although the pressure of population is forcing a greater and greater number to the less comfortable areas. Three-fourths of the inhabitants of the United States live between the isotherm of forty-five and sixty degrees, the milder portion of the continent. In recent years the northern portions of the nation and the great plains of Western Canada have gained large accessions of population, chiefly because of the discovery that those regions are more habitable than was formerly supposed, and of the heightened land values in older settled regions.

Agriculturists follow this same principle in their settlement of a new country. The most temperate regions of the United States were put into cultivation long before the most northern portions were touched. The streams of migration from the Atlantic seaboard poured through Kentucky and Illinois, Iowa and Missouri, Kansas and Colorado, leaving the Dakotas and the northern portion of Wisconsin, Minnesota and Michigan to be settled later. The river valleys and the lowlands along small streams filled in with the first settlers. There the soil is very fertile and the bluffs and trees afford a protection. The settlers who come afterward creep back over the elevations which inclose the valleys and take up the high, less fertile, and less protected land.

Community Progress Depends on Scientific Methods.—Social evolution occurred with the growth of man's inventive insight. One of its greatest efforts has consisted in the discovery of methods to control and use the forces and qualities of the physical environment. Those inventions which utilise the forces of nature move society forward in degree of culture most rapidly. Utilisation of fire, invention of the bow and arrow, domestication of animals, and so on, were revolutionary events in the history of man. The group which first adapted them had the advantage over other animals and human groups. They became superior in war and contest. The application of their inventive powers to nature made them richer economically, made living easier, and existence more comfortable. Some leisure could creep in which was utilised occasionally for the cultivation of the "finer" and "higher" things of life.

The amount of subsistence of a given region from time to time increases with the improvement of scientific methods. This is shown by the fact that Europe, which was agricultural at the time, was considered crowded several centuries ago. Yet since that time its population has trebled or quad-

rupled. The farming methods of barbarism are crude and unproductive. Civilisation brings improved methods and heightened yields. The increase of subsistence by the application of scientific agriculture doubtless has its limits. But relatively few communities of the world have reached and press hard upon those limits.

Progress does not consist wholly of material advance. Mind, morals, and a broader and deeper enjoyment of life are also involved. But it is true that these arrive with or follow the former. The civilisations with advanced methods of production are at the same time the cultured and the politically progressive and emancipated peoples. With the adoption of occidental methods of science and production Japan took its place as a world power among the most civilised nations of earth. Other nations are undergoing a similar evolution at the present time. Government, education, and better views of life come to be adopted, filling out the proportions to meet the demands of what we term progressive societies.

Community Vigour and Physical Variation.— The vigour and energy a community displays is related to physical conditions. Originally, the amount of subsistence a region afforded was the basis of the vigour of the group. Regions differ wonderfully in their bounties of subsistence. Some regions are truly niggardly in their productivity. Others are prolific in their fruits, grains, vegetables, and animal life. The land of the earth grades up from the one to the other. These differences are due to character of soil as to inherent chemical properties making them fertile or infertile; to variations in temperature making them conducive to rapid and luxurious growth or the reverse; and to humidity or rainfall, varying in amount from desert regions to sea-plains and river valleys. The wind is also a factor in carrying humidity, in evaporating moisture, in searing grow-

ing vegetation in some regions, and in eroding soil. Pests of various sorts may likewise constitute prominent features in crop and animal production.

Where two communities have corresponding stages or grades of culture the community which is by nature the more providently furnished with supplies to support life will manifest the greater vigour and advancement. This is very apparent throughout the United States. Probably every state contains many illustrations of the statement. Often adjoining neighbourhoods show the most violent contrasts by reason of differences in their physical conditions. In nearly every illustration some complicating factors are likely to appear which confuse the situation. Yet the principle is generally recognised in the teaching of the social sciences.

Limitations of Physical Environment.— Physical environment is not absolutely determinative of what a society or community is to be. We may recognise that physical conditions and economic factors are powerful agencies in forming and shaping communities without assigning to them sole mastery. An impartial survey of society and social evolution discovers countervailing agencies. Both physical conditions and economic factors are influenced by science and cultural circumstances. Mind masters material energy. Economic factors are products of scientific advancement.

To say that culture is a factor in determining what a given community may become is to recognise the importance of the race or stock strain in the development of a region. The Turks, who have possessed for centuries exactly the same region that was previously occupied by the Greeks, have not developed the culture and the civilisation of their predecessors. The race strain counts for a great deal in the life of a community. A large part of this race strain is made up of the state of mind, the point of view, the attitude toward morals, science, and progress; and of custom and sanction. To be progressive, other things being equal,

a community must have outlook as well as backlook. The former is a very necessary factor in progress.

II. PHYSIOGRAPHIC FEATURES OF THE UNITED STATES

Civilisation is not exclusively the outcome of physiographical factors, but the latter are certainly large determining conditions of the former. Agriculture, as constituting one of the great productive phases of civilisation, is bound by its general principles and laws. In fact it is certain that agriculture is more immediately dependent for its success and progress on physical conditions than are almost any other features of society. For this reason it is well to survey the more outstanding of those features of the United States.

The more important physical conditions for determining agricultural responses are topography, soil, temperature, precipitation, and air currents. Perhaps climate should be added as it is in some ways different from any one or any combination of the elements just named. It is obviously quite impossible in a brief space to follow in detail all of these features throughout the vast and complicated physiographical area of the United States. Therefore only the more salient features will receive attention.

Temperature.— The United States is divisible into two temperate zones, a northern and a southern. Certain characteristic features of plant and animal life occur in each of these regions because of the temperature. The boundary line between the divisions extends across the continent in a very irregular manner because of variations in elevation.

The normal surface temperature for July in the northern tiers of states from Maine westward to Montana is 65° for the more northern isotherm and 70° for the more southern. Near the eastern Montana line the more northern one curves north into Canada, loops into the United States again in eastern Montana and Idaho, passes again into Canada, then drops southward along the Pacific coast as far as San Francisco.

The more southern of the two northern isotherms curves southwest through western Montana, passes south to central New Mexico, thence northwest to northern Utah and Nevada, and thence to the Pacific coast. The two southern July isotherms graduate at 75° and 80° respectively. The northern one passes westward north of the Ohio River till it reaches central Nebraska, thence southwest to southern New Mexico, thence northwest to central California, and thence down the west central part of that state. The other one travels irregularly westward from southern North Carolina to the Panhandle of Texas, drops then almost to the Rio Grande, passes thence northwest to central California, and thence south through the state. In southwest Arizona and southeast California is a fifth isotherm with a July temperature of (85) degrees. 105

The normal surface temperature for January in the northern zone ranges from 25° in central Kansas to zero for a small section of North Dakota and Minnesota. In the southern zone it ranges from 35° to 50° in the southern part of the southern states, and to 65° in southern Florida. The absolute minimum temperature in the northern zone ranges from —30° in central Kansas to —63° in northern Montana; in the southern zone, from —10° in northern Oklahoma to zero in the southern part of the southern states, and to 40° in southern Florida.

The dates of the killing frosts are important items for agricultural matters. The average date of the first killing frost ranges from October 15 in central Kansas to September 15 in North Dakota. It is October 15 alike for southern New England, southern East North Central states, and southern New Mexico. It generally occurs in November in the Pacific coast states. In the South it ranges from November 15 to December 15. The latest killing frost east of the Rocky Mountains is April 15 for about the latitude of the Ohio River. It extends into February and March for the

southeastern states and it is about the same on the Pacific coast.[1]

Precipitation.—The precipitation, commonly called rainfall, varies from a mean annual amount of 60–70 inches in certain sections of the southeastern states, northwest Oregon and Washington, and east central California to 10 inches or less in the greater part of Nevada, northwestern Utah, and a portion of southwestern Arizona. All of the United States east of a line drawn from Minneapolis, curving slightly westward, to the southern point of Texas has an annual precipitation of 30 inches or more. The southeastern states possess one of from 50 to 70 inches. A region averaging about 200 miles in width extending from Mexico through Central Texas slightly northeast to Canada has a rainfall of from 20 to 30 inches. Most of the region west of this to the Pacific Coast states, save the arid region above described, and certain considerable regions with one of 20–30, receives from 10 to 20 inches annually.[2]

Likewise the average annual humidity of the Plains, or Steppes, and of the Rocky Mountains and western Plateau and interior basin regions is low, ranging from 65 in eastern Colorado to 40 in southern Arizona and New Mexico. East of the Great Plains the humidity is 70 to 80.

The time when the precipitation is received has an important bearing on crop production. The percentage of annual rainfall received in the six summer months, that is from April to September, ranges from 10–15 in a narrow strip along the Pacific in western California to over 84 in eastern Colorado, northwestern Kansas, and Central Nebraska. An irregular V-shaped region having the base on the Rio Grande in southwestern Texas with a width of about 150 miles and enlarging northward to Canada where it extends from west central Montana to Lake Superior, receives

[1] Bowman, "Forest Physiography," pp. 114–116.

[2] Same, p. 118 and Thirteenth Census, U. S., Vol. V, opposite p. 827.

from 70 to 80 per cent. of its rain in these months. A narrow section varying from 50 to 150 miles in width immediately west of this receives from 60 to 70 per cent. of its precipitation in that period. The greater part of the east Mississippi area is favoured with over half of its moisture then.[3]

Wind Currents.—Wind currents influence agriculture because they are a condition of rainfall and temperature. Such currents, in turn, are largely determined by proximity to the sea and mountains' barriers.

"The western slopes of the Coast Ranges of Oregon face the ocean and run at right angles to the westerly winds, and their rainfall exceeds 100 inches a year; the Ohio Valley lies in the track of the more or less regular cyclonic storms that move northwestward from the Gulf, and receives a rainfall of 40 to 50 inches a year; nearness to the sea gives the greater part of the Atlantic and Gulf Coasts a higher rainfall, 50 to 60 inches, than is enjoyed by any portion of the eastern half of the country except the mountains of western North Carolina. By contrast the mountain rimmed parks of Colorado, and the Great Basin of Nevada, are regions of diminished rainfall; the Coast of southern California owes its dryness chiefly to its position outside the belt of cyclonic storms; the dryness of North Dakota is chargeable chiefly to remoteness from the sea, although in this, as in other cases cited, the rain-producing or rain-resisting forces commonly operate in combination with other forces, so that the influence cited should be understood to be the predominating and not the sole influence."

Since precipitation is "due to the cooling of the air to and below the point of saturation," mountain ranges near the sea act as temperature reducers of air currents. When these currents contain sufficient moisture the rainfall of a mountain region is likely to be heavier than that of the surrounding country. This condition occurs in the northern coast

[3] Bowman, "Forest Physiography," pp. 118–120.

Range, the northern and southern portions of the Sierra Nevada, many sections of the Rockies, and the southern portions of the Appalachian range in North Carolina, Tennessee, Georgia, and Alabama. The mountains also seem to shut off moisture bearing air currents from interior regions as in the case of the Great Basin and other interior mountain districts, and of much of the Great Plains area where the currents are deflected into northerly and southerly winds, the sea being quite remote in both cases.[4]

Soil.—Soil is a "great complex of varied elements, formed in many ways and subject to the most widely diverse changes after its formation." It contains debris from rock, organic matter, a soil atmosphere that is richer in carbon dioxide and generally in water vapor than the atmosphere above the soil, living organisms of various kinds and soil water, a solution of the products of other substances. Hence the general view that "soil is mere dirt or rock waste, or that it is everywhere the same," is untrue. It is likewise evident that in a great continental area like the United States there must be the greatest diversity of soils.[5]

Because soils are so complicated and their study is so exceedingly intricate, it is quite impossible to give a detailed treatment of our various soils and soil regions. Only some of the conspicuous features of the subject can receive attention.

Plant life adjusts itself not only to temperature and precipitation conditions but also to those of soil. It is even believed that varieties of plants may be the result of certain chemical properties of given soils.[6] There must be a consequent diversity of plants in a large area dependent upon the chemical and other properties of the soil. "In the higher plants that have been investigated up to the present time the

[4] Bowman, "Forest Physiography," pp. 117–122.
[5] Bowman, *loc. cit.*, p. 22.
[6] *Ibid.*, p. 62.

elements indispensable to normal development are invariably ten in number: oxygen, hydrogen, carbon, nitrogen, phosphorus, sulphur, iron, potassium, calcium, magnesium. If a single one of these substances is in a chemical form unavailable to the plant, the plant enters into a pathologic condition or refuses to grow. Besides these ten substances all plants absorb various other substances whose utility is unknown." [7]

In their larger aspects, the soils of our country comprise the great alluvial plains of California and the Mississippi's Valley, which are among the most fertile regions of the world; the old lake bed, such as that of Lake Agassiz, now the Red River Valley of the North and the drained lake beds, as those of Minnesota, also exceedingly fertile areas; the loess deposits of the Missouri valley and the Plains in the production of which the wind has been a large agent and which are rich in soil properties; the commonly fertile glaciated deposits of the northern portions of the nation east of the Rocky Mountains and north of the Missouri River, with minor areas in the west; and the residual soils of the remaining portions of the country which vary from low fertility as in certain portions of New England to the extreme of productiveness in the limestone districts of central Kentucky.[8] It may be said that practically no part of the United States possesses a soil so poor that by means of proper fertilisation it cannot be made to yield a crop. This does not mean that topographical and climatic features may not be present in some sections which will prevent or limit production.

Two distinct types of regions may be compared as to the character of their soils. New England presents an agricultural region that is characterised by its topographical and soil features. A writing of 1649 says of it that "except a

[7] Bowman, "Forest Physiography," p. 65.

[8] Gregory-Keller-Bishop, "Physical and Commercial Geography," pp. 61–65; and Bowman, *loc. cit.*, Chap. 1.

herring be put into the hole that you set the corn or maize in, it will not come up." The caricature of New England fertility thus began early in our history.

While New England contains some very fertile areas the uplands, the remnants of the ancient mountains which were worn down by the forces of nature, predominate. The upland soils are not rich. They are made of the drift of glacial times and contain much coarse wastes which are not available for plant use. "The soils are often thin, or lie on steep and bouldery slopes, and the range of crops is limited by the shorter summer and the severe cold of the winter months. The decline of general agriculture has been a central feature in the later history of New England."

But "there are weights to be thrown into the other side of the balance. Shaler has shown how the very coarseness of the soil elements insures permanence; these minute, pebbly fragments of rock will gradually disintegrate and yield, in soluble form, the elements needed by plants, and the soils may continue to have moderate fertility long after the soils of the Mississippi Valley are exhausted, or begin to require large use of fertilisers. And it is wholly to be desired that much New England upland should relapse into forest. Mountainous and glacial conditions have combined to fit these lands for trees and for nothing else." [9]

The "arid region" is another region of small or backward producing power. The backwardness is primarily due to insufficient water. The soils on the other hand are regarded as exceptionally rich. In humid regions the water leaches out the salts and transports them from the land, but in the dry regions this takes place to a slight degree. These salts are the source of great fertility and where irrigation is possible the land is unusually productive, as about San Bernardino, California.

Arid region soils on both sides of the Rocky Mountains

[9] Brigham, "Geographic Influences in American History," pp. 47–8.

possess high percentages of lime, and commonly also of magnesia, although limestone formations are much rarer than in the eastern humid regions. The large amount of lime is the cause of flocculated soil making possible great depth of root penetration and easy tillage. The nitrogen content of upland arid soils is as high as 22%, the average for all soils about 15%, while the average in soil generally is but 5%. They are low in vegetable matter and there is little distinction between the soil and subsoil. The latter is more decomposed, less raw, than are subsoils commonly, and is very fertile, yellow pine trees growing on it in the placer mining regions and which are now large enough to cut. The insoluble ingredients such as silica in arid soils is 69%, in comparison with 84% for that of humid regions.[10]

III. AGRICULTURAL RESPONSES TO PHYSICAL CONDITIONS

One method of relating agriculture and physical conditions consists in considering the great producing areas of the United States. These are characterised in each case by certain dominant products which are partly the outcome of physical conditions, chiefly of those of temperature and moisture. In the case of many if not all agricultural products, conditions which are due to economic development and changes play an important part in determining the amount which will be produced from time to time. Thus the opening of prairie regions which could be easily farmed and on which machinery could be successfully employed caused the relative decline of agriculture in the North Atlantic states. The rise of populous cities caused first the North Atlantic states and later other regions to engage in gardening and dairying almost exclusively or to a large extent. The facility with which machinery could be used in the production of grains in the northwest central states led to a neglect of other kinds of crops. The raising of cotton in the south gained such a hold

[10] Bowman, "Forest Physiography, Chap. 7.

on farmers for various reasons that although corn is a good second as a crop it has received much less attention than has cotton and frequently the farmer has to purchase his meal and bacon.

Producing Areas.—By dominant agricultural regions the United States is characterised as follows: First, New England and the Middle Atlantic States engage in mixed farming, dairying, and market gardening as staple agricultural pursuits. In portions of this region, as in the mountainous parts of New England, the vigour of the climate, the poverty of the soil, and the fact that no crop ever becomes predominant have made large scale farming impossible. In 1910 21.5% of the value of all farm products in New England and 17.5% in the Middle Atlantic states were from vegetable crops; 41.9% in the former and 31.4% in the latter division was from hay and forage. Hay and forage was fed chiefly to milk cows, as they formed the larger proportion of cattle.[11]

Second, the area in which corn and winter wheat are the chief crops embraces a zone having for its northern and southern sides the 43rd and 35th parallels of latitude, its eastern end the Appalachian Mountains and its western end Colorado and Wyoming. Because corn, oats, hay and forage are large crops, live stock raising is also extensive.

Third, closely associated with the second region is the spring wheat belt. This lies north of the 43rd parallel and extends from the Lake region to Montana and Wyoming. All of the East and West North Central divisions with a portion of the southern divisions lie in this large district, but the percentage of value of the chief products of the North Central division will indicate the dominant crops. Of the crops whose value was reported in the East North Central division the percentages of the value of all such crops were as follows: Corn 38.9, hay and forage 16.5, oats 13.3, wheat

[11] Abstract Thirteenth Census, pp. 366 and 314.

10.9; vegetables 7.0; those for the same crops respectively in the West North Central states were 34.8, 14.0, 11.2, 25.2, and 3.9. Their importance in the matter of live stock is seen in the fact that they produced 44.5% of cattle in the United States, 50.5% of all horses, mules, asses, and burrows, 61.5% of all swine, 27.9% of the sheep, and 5.1% of the goats.[12]

Fourth, the cotton belt lies south of the 35th parallel and extends from the Atlantic Ocean to New Mexico. It comprises pretty much all of what is usually termed the South. The percentages of value of all crops by the leading crops in these divisions were for the South Atlantic: Cotton 40.8, corn 20.1, vegetables 9.8, hay and forage 5.1, tobacco 4.4, fruits and nuts 3.8; for the East South Central, cotton 37.1, corn 27.4, vegetables 7.6, hay and forage 5.4, tobacco 8.3, and fruit and nuts 2.4; for the West South Central, cotton 49.9, corn 22.8, vegetables 4.8, hay and forage 4.7, rice 2.4 and sugar 3.1.

All of these divisions are, with two exceptions to be noted, generally much lower in the amount of live stock than the North Central states. However the West Central states rate about third of all divisions in the United States in this respect when measured by the per cent. of possession of the total number in the nation. It exceeds any other division in its possession of goats, mules, asses, and burros.[13]

Fifth, there is a large area comprising several states which has been dominantly a range region. It is made up of the states of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah and Nevada. We have seen that this plateau and mountain region forms a peculiar district because of its elevation, roughness, character of soil and especially on account of the slight precipitation which obtains, save in minor portions. Little crop agriculture as a conse-

[12] Abstract Thirteenth Census, pp. 311 and 366.
[13] Same, pp. 311 and 366.

quence has occurred. However the region has furnished grazing grounds for vast numbers of animals and in proportion to its population it has been the leading live stock area of the nation. This is seen in the fact that the mountain division of the United States has $2,119 worth of live stock per farm. The division standing next in rank is the West North Central with a live stock value of $1,398 per farm. Out of a total value of $383,272,141 in live stock in 1910 the Mountain division had $146,269,549 worth of cattle, $111,656,290 worth of sheep, and $112,606,228 worth of horses.[14]

Sixth, the Pacific Coast states form a distinct physical area, having as they do the benefit of the tempering air currents and the moisture of the nearby ocean, these benefits being largely restricted to their area by the high mountain chains on or within their eastern borders. The percentage of value of all the crops reported in these states by individual crops in 1910 was: Hay and forage 26.5, fruits and nuts 21.4, wheat 18.6, vegetables 8.1, oats 4.8, corn 0.6, other cereals than wheat, oats, and corn 8.2, flowers, plants, nursery and forest products on farms 5.5, all others 6.4. The chief products, it is seen, are hay and forage, fruits and nuts, and wheat.

As to live stock this division ranks fourth among the divisions in the value of live stock per acre of farm land. Measured by the number of live stock produced its rank among the nine geographical divisions is: In cattle 8, horses, mules, asses and burros 8, swine 7, sheep 3, goats 3. Ranked by the value of live stock produced per acre of farm land, it holds sixth place.[15]

Major Crop Response.— Another method of observing the responses of agriculture to physical conditions is formed in selecting a number of farm products, and noting the phys-

[14] Thirteenth Census, U. S., Vol. V, pp. 328 and 334.
[15] Abstract Thirteenth Census, pp. 311–12 and 366–7.

ical conditions which determine their production. To follow this method in detail relative to any great number of products would require an extended treatment. A selection must be made of the more outstanding crops, those whose dimensions climatic and regional influences largely account for. We shall have to omit some products whose value and place in the community life are very considerable. Thus the oats industry, that of rice, sugar beets, forestry, and vegetables, not to speak of that of animals which is clearly associated with certain kinds of cereal growing, have a large volume of production and are of increasing importance. Perhaps it is sufficient to indicate, in the case of live stock production, that domestic animals are not inherently regional, but that they occur more dominantly in given sections because certain cereals and grasses are favored there. Thus the "corn belt" is accountable for hog and cattle raising and the grazing lands of the arid states for the cattle and wool industry.

Wheat.— Wheat is a grain that at first consists of a tuft of green blade, and later of stalks that support the heads of grain. The number of the stalks and heads are determined by the plants' vitality; that in turn depends on the climate. The first stage of growth demands a considerable period of cool, moist weather in which there is only a moderate rainfall. The second stage of growth requires warm, bright and even dry weather. Abundance of rain is productive of straw, rather than grain, induces rust and other fungus diseases, and causes the grain to shrivel before harvest and to mould after harvest.

As a consequence of these requirements, the best wheat areas in the United States are comprised in Kansas, Nebraska, the Dakotas, Minnesota, eastern Oregon and Washington, and central California. The heavy rainfalls of the eastern and southern regions make them unsuited for the production of wheat. The effect of the heavy summer rains

of the cotton belt is observed in the low yield. The average yield in Georgia for the year is but 7.9 bushels per acre, while that of Wisconsin is 15.7.

The northern extension of wheat is largely due to the introduction of improved machinery for the milling of spring-sown wheat. Winter wheat was formerly almost exclusively grown. The northern grain is chiefly Red Fyfe, a variety that is so hard and brittle that for many years it could not be satisfactorily ground. Under the processes used it made poor flour. With improved processes, however, this wheat produces flour of the highest grade and the value of the lands which produce it has been enhanced greatly. The other aspect of the development of the western area, a development which has been due to improved seeding, harvesting, threshing, and milling machinery as well as to the discovery of more desirable wheat climates, is the fall in land values of western Europe, Great Britain, and of the eastern United States. "Many farms have been abandoned in New England and New York, while many thousands more throughout the North Atlantic slope would sell for less than before there was a mile of railroad in America. New York state produced 12 million bushels of wheat in 1839 and 6 million in 1909." [16]

Barley.— The climatic needs of oats and rye are very similar to those of wheat and they may be passed over. While the same is largely true of barley it has some characteristics which deserve notice. It has a much wider climatic range than wheat. The wheat line in Russia is near St. Petersburg but barley is grown 150 miles beyond the Arctic Circle in northern Norway, Sweden, Russia, and in Finland. Its ability to resist droughts and heat makes it a staple crop south of the equator in Africa. This cereal has the drawback of possessing insufficient gluten to make sticky

[16] J. Russell Smith, "Industrial and Commercial Geography," pp. 41–64.

dough. Had it this property — Mendelian selection may bestow it — the cause of its large yield, hardiness and wide climatic range, it would probably supplant wheat. Its large yield makes it available as a food for domestic animals in regions where corn cannot be grown and its drought resisting quality fits it for arid and semi-arid lands. When cut before the grain matures, it makes good forage. For this reason and because of its large yield barley is rapidly displacing wheat in California. Kansas also is feeding larger and larger quantities to hogs.

The important barley districts in the United States are California, which produces 25 per cent. of the national yield, southern Minnesotas, and the Dakotas. Because it ripens earlier than wheat, permitting its harvesting without entrenching on that of the latter, there is a practical economy in its production.[17]

Corn.— The climate requirements for the successful growing of corn are about four months of growing season, a hot midsummer with warm nights, and sufficient rains to promote growth. Arid regions having cool nights, as obtain in Nevada, although the temperature is otherwise favourable, are unsuited to it. Neither is a continuous tropical heat best adapted to its needs, as it seems to require the approach of autumn to direct its metabolism from the creation of leaves to seeds. Thus the yield of corn is greater in the northern states than in the Gulf region. The yield in Louisiana during ten years was 16.3, that in Wisconsin for the same period was 33.2 bushels per acre.

The Great American Corn belt, a region which produces as much of that cereal as all the rest of the world, is the Mississippi Valley, more particularly that portion of it which comprises all of Iowa, most of Missouri, Illinois, Indiana, and Ohio, and about half of Kansas, and Nebraska. Not only the climate but the configuration of land is conducive

[17] Smith, "Industrial and Commercial Geography," pp. 67–70.

to the growth of corn. Fertility of soil, freedom from stones, level character of surface, and abundant rainfall distributed during the summer in short showers are features which combined, make this large area the most favoured corn-producing spot. The topography permits the largest use of the cultivator and other machinery in its culture.

There are special sections of country, that topographically are not so suited as is the former area to corn raising, which also have made that crop their staple. This has been the case in the central Appalachian Plateau, which contains portions of Kentucky, Tennessee, West Virginia and other states, and in the upland portions of southern Missouri and northern Arkansas. Because of the absence of railroads and well developed wagon roads, agricultural production was confined to such products as could be readily utilised at home. Corn was admirably suited to this purpose. It furnished meal for bread, food for the swine which supplied the bacon, and was distilled in local stills, the liquor from which was more easily transported to market than the bulky corn itself.[18]

While the "corn belt" is the great producing area of that crop, when measured by its ratio to the population of the states in that region, states of other climatic sections show the highest yield per acre. Thus the yield per acre for the three-year average, 1909-11, was the highest in the New England states, being 40 bushels. The middle Atlantic states and California produced as great a yield as did Ohio, Indiana, and Illinois, the states of highest yield in the corn belt, a yield of 35 to 40 bushels per acre. Minnesota, Wisconsin, Idaho, Nevada, Utah and Arizona, produced as much per acre, 30 to 35 bushels, as did Iowa. Four southern states, Virginia, Tennessee, Arkansas, and Louisiana, together with New Mexico and North Dakota, yielded as heavily as Nebraska. Six states outside the corn belt had

[18] Smith, "Industrial and Commercial Geography," p. 83.

the yield of Kansas, and five that of Missouri. That the corn growing area is pushing northward is shown by the fact that Minnesota ranks third in yield per acre, South Dakota and Montana fourth, and North Dakota fifth, all these states outranking Kansas, which shows next to the lowest yield.

The growing American population, the increased production of live stock, the practical failure to enlarge the area of extensive cultivation of corn since 1895, and the decline in the acre yield of corn because of incessant devotion of the same land to its culture, have caused a decline in the exportation of that cereal and an accompanying rise in its price. Corn exportation fell from 195 million bushels per year in 1896-99 to 50 million in 1910-11. The price of corn in 1899 was about 34 cents in Chicago: in 1909 it was 67 cents. The lessened corn export has had the effect of driving European countries to corn production and of pushing up the price of the stock foods, thus causing world-wide price disturbance and industrial adjustments.[19]

Cotton.— It would be difficult to mention an agricultural staple which has impressed itself so deeply on the institutions and development of a people as has cotton on the southeastern portions of the United States. Much of this influence is due to favourable climatic conditions.

Although a tropical and sub-tropical plant, cotton thus far has been most successfully raised between 40 degrees north and 30 degrees south. It demands for its growth a season of about seven months, which is free from frost, or from April 1 to November 1. It also requires a good summer rainfall, though not too much, and uniform summer temperature without excessive heat. As in the case of corn, cotton appears to do best where the approach of autumn drives the plant to turn from growth to the production of its fibre. The area suited to cotton production in the United States is estimated at 700,000 square miles. The

[19] Smith, "Industrial and Commercial Geography," pp. 82–101.

coast regions of the South Atlantic states, because of heavy rainfall, and much cloudy weather, are less fitted to its production than are inland districts. An abundance of cheap land, and the use of slaves in raising cotton and corn early made the South a one-crop region, and this condition tends to persist. Only a small portion of the land available for cotton is utilised. Twenty thousand square miles of the most available area were in cotton in 1879, about double that amount in 1898, and about one-fifteenth the total usable area in 1911.

Texas, Georgia, and South Carolina have the largest per capita production of cotton, over 350 pounds. In the next class having 250 to 350 pounds per capita are Alabama, Mississippi, Arkansas, and Oklahoma; North Carolina raises 150 to 250 pounds per capita; Tennessee and Louisiana 50 to 150; and Florida less than 50. In percentages of the total amount produced the states rank as follows: Texas 26.6, Georgia 16.9, Alabama and South Carolina 10.5, Mississippi 9.7, Arkansas 6.4, Oklahoma 6.4, North Carolina 6.4, all others 6.6.

Cotton, like corn, requires cultivation during the growing period. When ripe and the fibre shows white from the burst pods, it is picked by hand. Picking is often carried on through the winter months or even in the spring, if storms have not beaten down the stalks. Although cotton picking is light work and is largely done by women and children, the large amount necessary, costing fifty cents to a dollar per acre, makes it the limiting factor in cotton production. Successful cotton picking machines would work a revolution in raising the staple and place it on the same basis as corn, wheat, and other grains, making possible the culture of many acres by one person.

The nature of cotton as a crop, being susceptible of indefinitely keeping, easily handled and uniformly salable, has made it peculiarly subject to the crop mortgage system.

Established after the Civil War, this system continues to a considerable extent. It helps keep alive a one-crop agriculture, in which few supply crops are grown, because the mortgagee is interested in only the crop on which he has his lien. Neither diversification of crops nor a more scientific method of production receives a proper stimulus under this system. "Thus the South, which has excellent natural facilities for the development of live stock industries and the growth of forage crops, continues to import mules and corn, butter, cheese, and pork, which it might produce as cheaply as any other part of the world."

It is possible that the boll-weevil pest that has destroyed so much cotton may be the means of introducing a better balanced agriculture into the South. In Texas, when the cotton crop was continually threatened, bankers and merchants refused to lend money on the future product. While the immediate result was a financial and agricultural panic, the disaster forced farmers to a study of methods of preventing the boll-weevil pest, the production of other crops, which would feed their families, and how they could live at home on the products of their own farm and still raise cotton.[20]

Fruits and Nuts.— While the production of these crops is widely distributed some portions of the nation are more favourable to certain of them than the other sections. Since it is obviously impossible in the space at our command to describe the peculiar climatic demands of all fruits and nuts or even the more notable ones, we must be satisfied with a brief notice of selected industries which statistical statements indicate are important for their regions.

Small fruit production occurs in all the geographical divisions. The divisions rank according to the value of the product expressed in millions of dollars in the following order: Middle Atlantic 6, East North Central 5.8, South At-

[20] "Year Book," Department of Agriculture, 1911; Smith, *loc. cit.*, pp. 468–482.

lantic 4.1, West North Central 3.9, Pacific 3.3, New England 2.4, West South Central 1.7, East South Central 1.5, Mountain 0.9. Relative to the value of particular fruits produced the Mountain division ranks very low in strawberries, the Mountain and New England divisions are low in blackberries and dewberries, the Middle Atlantic and East North Central very high in raspberries and loganberries, the East North Central and Middle Atlantic very high in currants, West North Central and South Atlantic in gooseberries. A large part of these variations are of course due to the accessibility of markets. Maryland and Tennessee appear to be specially adapted to raising strawberries, New York to currants and raspberries, and New Jersey and Massachusetts to cranberries.

Orchard fruits also are well distributed. The Mountain division was backward in 1899, but had eclipsed New England and West South Central in value of product ten years later. The nine divisions ranked, when stated approximately in millions of value of product in 1909, as follows: — Middle Atlantic 28.6; Pacific 26; East North Central 24.4; South Atlantic 15.7; West North Central 14.7; East South Central 11.1; Mountain 7.6; New England 7.3; West South Central 5.3. The leading states in orchard products by a similar statement were: California 18.3; New York 18; Michigan 9; Pennsylvania 8; Missouri 6.5; Ohio 5.6; Colorado 4.6; Iowa 4.2. Colorado possesses a greater product value than all of the other Mountain states combined.

New York is the pre-eminent apple producing state, the value of its apple crop in 1909 being 13.3 million dollars. This was over twice the value of that of its nearest competitors, Michigan with 5.9 and Pennsylvania with 5.5. Iowa, Virginia, Kentucky and Colorado came next with over 3 million dollars worth each. Washington, California and Ohio had nearly 3 million dollars worth each.

Thirteen states widely distributed produced in 1909 over

one million dollars worth of peaches each. California's value was 4.5 million, being over twice that of New York and Georgia, each of which had a peach crop value of over 2 million.

California was the only state in 1909 which produced over a million dollars worth of plums and prunes, its crop value being 5.5 million dollars, over half of the national crop. Its nearest competitor, New York, produced but 0.5 million dollars worth. In the production of pears, New York and California yielded about 1.5 million dollars worth each, only one other state, Michigan exceeding a half million. California and Pennsylvania led in the value of cherries, each producing approximately one million dollars worth out of a total national value of 7.2 millions.

But three states produce over a million dollars worth of grapes each: California with 10.8 millions, New York 4, and Michigan 1.5, out of a total national grape crop value of 22 millions.

Climate governs in the production of citrus fruits; but six states, California, Arizona, Texas, Louisiana, Missouri and Florida growing such crops. The total national citrus crop value in 1909 was 22.7 million dollars, 17.6 being from oranges, 3.0 from lemons, 2 from grape fruit. The value of the other citrus crops is less than $100,000. California produced 12.9 million dollars worth of oranges, 3.0 of lemons, and 143 thousand dollars worth of grape fruit; Florida 4.3 million dollars worth of oranges, 1.9 of grape fruit, and $64,000 worth of tangerines.

The total national value of the nut crop in 1909 was 4,447 thousand dollars. Of this value California was responsible for 2,959 thousand and Texas $562,542.[21]

[21] Abstract Thirteenth Census, pp. 409–417.

REFERENCES

Craig, Wallace. "North Dakota Life: Plant, Animal, and Human," reprint from *Bull. of the Amer. Geog. Socy.*, p. 15, July 1908.

Lord Kelvin. "The Age of the Earth as an Abode Fitted for Life," Smithsonian Inst. Rep., 1897, pp. 337–359.

Keane, A. H. "Ethnology," Chaps. 2 and 3.

Fiske, John. "Excursion of an Evolutionist."

Spencer, Herbert. "Sociology," Pt. 1, Chap. 3.

Ripley, Wm. Z. "The Races of Europe," Chaps. 1, 2, 19, 20.

Small and Vincent. "Introduction to the Study of Sociology," Bk. II and Bk. III, Chap. 1.

Giddings, F. H. "Inductive Sociology," pp. 35–40.

Thomas, W. I. "Source Book for Social Origins," Pt. I.

Fetter, F. A. "The Principles of Economics," Chap. 9.

Libby, O. G. "Physiography as a Factor in Community Life," *Jour. of Geog.*, 4: 209–14.

Ward, Lester F. "Pure Sociology," Chaps. 3 and 5.

Agee. "Crops and Methods for Soil Improvement."

Bowman. "Forest Physiography."

Brigham. "Geographic Influences in American History."

Burket. "Cotton."

Chisholm. "Handbook of Commercial Geography."

Gregory-Keller-Bishop. "Physical and Commercial Geography."

Huntington, Ellsworth. "The Fluctuating Climate of North America," Annual Report Smithsonian Institution, 1912.

Mill. "The International Geography."

Smith, J. R. "Industrial and Commercial Geography."

Smith, R. E. "Wheat Fields and Markets of the World."

Abstract Thirteenth Census.

Thirteenth Census, Vol. V.

"Year Book," Department of Agriculture, 1911–12.

CHAPTER IV

TYPES OF COMMUNITIES AS RESULTS OF THE DIFFERENTIATING EFFECTS OF ENVIRONMENT

Other Than Physical Environment.— It might be expected that there would be variations among rural communities. As a fact not all are alike. Neighbourhoods possess individualities which in some cases are very pronounced. In broad terms we may say that these distinctive traits are the products of differences in environment. By the term environment as used here is meant not only the physical but also the occupational and historical conditions. The last two are the factors which society itself furnishes in large measure, although occupations of a given region, to a considerable degree, are determined by the region. The historical factor is completely in the social environment. It constitutes what is more commonly alluded to in sociology as "social heredity."

There are certain regions of the United States where the historical factor plays an imperative part in determining what the community shall be. This is notably the case in the older regions, as among New England hills, where custom is so strong that old ways are kept up in the face of advantageous inventions and processes. It is even more impressively seen in the southeastern portion of our country, where the institution of slavery existed up to the end of the Civil War. The customs, points of view, prejudices, race animosities, and many social conditions which were the offspring of slavery, exist to influence and direct the currents of present life.

Without attempting to draw the boundary line with fine

distinction between the physical and social causes of differences we will seek to locate and describe several of the types and sub-types to which these agencies give rise. It is apparent that the distinctions exist and it may be of some value to outline them.

I. PURE AGRICULTURAL TYPE

What may be designated as the pure agricultural type exists wherever agricultural pursuits occupy the whole attention and energy of the community, as was previously established. Psychologically, types of societies are fixed by occupations, because they determine interests, organisation, outlook, and kind of culture.

It is also true that certain effects of a collective and neighbourhood nature likewise arise out of the forms of undertaking which vary from rural community to rural community. Some of the effects we have knowledge of. Analogically we have a right to infer that corresponding results ensue from those forms whose consequences we do not as yet know intimately.

Under the pure agricultural type is to be noted the existence of several sub-types. As to origin these arise out of variations in the form of the products. Let us list some of the more cognisable sub-types and notice certain of the important results which come out of their accompanying activities.

Exclusively Small Grain Raising Community.— Some of the conditions of the production of small grains in the United States are the following:

(1) Only a small part of the year is actually spent in productive activity. Seeding, harvesting, and threshing are the active periods. Between them are long periods of inactivity. The result is extensive leisure for the men, there being no subsidiary or incidental work carried on in connec-

tion with grain raising. (2) Production takes place by means of mechanical devices which make this form of agriculture almost an industrial occupation of the skilled sort. (3) Expansive cultivation is dominant, large areas being depended on for adequate returns, rather than small areas with intensive culture. (4) Because of the large area of the land tilled the homes are necessarily widely separated. This imposes a consequent social isolation.

There are certain social and individual results which come from or are related to those conditions.

(1) There is a generally high intelligence. This is partly historical, but tends to come from stimulated and necessary reading, from intercourse and discussion with those of like interest, and from the mechanical and semi-industrialised character of the occupation. (2) Spasmodic coöperation undertakings obtain, such as the Farmer's Equity Association, etc. (3) Social life for the family is largely wanting, especially for the wives and mothers. This is due to the isolation just noted.

Exclusively Corn-Raising Community.— As consisting of a single form of crop, a staple which is available to serve as food for man, various domestic animals and fowls, the pure corn-community does not largely exist. When, however, poultry, swine, and cattle are kept on the farm as incidental means of furnishing food for the household the form of production might be regarded as of the pure type.

Some of the conditions which accompany corn culture are these:

(1) Quite incessant labour takes place from early spring when the ground is broken up and crops put in, through a period of cultivation, till the garnering is completed in the fall or early winter. There is an interim between "laying by" corn and "gathering" it in which it does not demand attention. But haying and other incidental matters usually occupy this period. (2) Leisure for the men is conspicuous

during a more or less protracted winter. (3) The individual areas under cultivation are smaller than in small-grain growing, with a consequent closer proximity of homes. (4) The labour processes are mostly mechanical with the exception of husking and shovelling, and the incidental choring. (5) There is necessarily much choring due to the maintenance of cows, hogs, chickens, and sometimes fruit, bees, and gardens.

The effects of the foregoing conditions on life and society are essentially and generally as follows:

(1) Relatively high intelligence, especially in the more progressive regions of the United States where more advanced methods are followed. (2) The existence of considerable neighbourhood social activities, especially among the women, and of neighbourhood coöperation. Dances, spelling matches, husking bees, are familiar forms of association. (3) A larger amount of the collective sort of play among the children of a neighbourhood takes place than in the small-grain type. This arises from the proximity of homes.

Cotton-Raising Community.— Cotton production, either as an exclusive or as the leading business, dominates the attention, agriculturally, of the whole southeastern portion of the United States. Production maps define the area as the "Cotton Belt." Cotton is one of the most important crops and articles of export of the nation. Both physical and social conditions have set aside this area to the production of the white fibre.

Climate, soil, and topographical conditions originally favoured the establishment of slavery in the South. When about to be eliminated by the operation of natural and historical causes the invention of Whitney's gin renewed and multiplied the value of slave labour in the culture of cotton, which then became "king." In a peculiarly close manner, cotton and the South, slave labour and cotton culture entered into association with each other. The Civil War eliminated

slavery, but it could not eliminate the partnership previously formed. Negro labour continued to be the mainstay of the South in the raising of cotton. Custom prevented the departure of the black from the seat of their enslavement.

Separate maps localising these geographical features, namely, the densest negro population, the richest soil, a topography of level plains, and the chief cotton regions, would cover almost the same territory.[1] This indicates the close connection existing between the several factors. Race prejudice, chiefly on the side of the whites, serves as an obstacle to the rise in social and economic matters on the part of the negroes. Historical situations which it took generations to create are too profound to be eradicated in a generation. Thus the "cotton belt" remains peculiarly devoted to "King Cotton," because of social conditions as well as by reason of the physical inducements.

The more prominent conditions which accompany cotton production may be observed generally throughout the southern states.

(1) Either large farms or plantations exist with many negro labourers operating under a manager; or there are in existence many small cotton farms with renters; in some cases with owners. A common landscape in the cotton belt is a wide level tract of tilled land, dotted every few hundred yards with negro cabins. These are set in the midst of cotton fields, the ground about them being tilled by the occu-

[1] This statement evidently is not true of the situation in the State of Texas, as is indicated by a map of that state, recently sent me by Professor Charles B. Austin of the University of Texas, which shows the distribution of negroes and of tenancy. I quote from Professor Austin's letter. "A glance at the maps prepared by Mr. Wehrwein will show that in Texas the area of the greatest cotton production is not the area of densest negro population. In Texas the greatest number of negroes are not found in the area of our richest soil. In Texas farm tenancy and cotton go together, but tenancy is pretty much a white man's problem."

pants. Most of them have but one door, and a small square opening in one wall serves for a window. (2) Much or most of the labour of producing cotton is done by hand. Small, one-horse ploughs are frequent. The hoe is a conspicuous farm implement. Cotton picking is done by hand, although a mechanical cotton-picker is in the commercial field. The ginning and bailing is performed by means of machinery. (3) The operation of the credit and lien systems by managers and storekeepers serves to keep the negro renter continually in debt and in practical serfdom. (4) Unemployment between crops, and between laying by and picking cotton, offers an opportunity for loafing.

Some of the effects of associate conditions are:

(1) There is a generally low intelligence of the workers and their families, due to the social inheritance and to the backward agricultural methods in use. (2) Especially is there shiftlessness, hopelessness, and unprofitable leisure on the part of the mass of negro labourers. (3) Much social life, particularly on plantations, exists of the noisy, boisterous sort. Revivals and dances are especially popular. (4) Some co-operation occurs on the part of neighbour farmers in the cotton-picking season.

In a similar manner various other forms of the pure type of agricultural community might be described. The task awaits the hand of those who are familiar with life under those conditions. Thus we would have fruit raising, stock raising, market gardening, dairying, and perhaps other lines of agricultural operation as varieties. Each variety, by the very force of conditions surrounding the activities of the persons engaged in it, would offer a community which, in certain respects, differs from other communities.

II. THE MIXED-AGRICULTURAL TYPE

Diversification of Industry.— Many of the agricultural communities of the United States constitute what may well

be called the mixed-agricultural type. This exists wherever there is a considerable combination in the production of crops. The life of the people is modified to the degree to which the combination is made and their interests are affected. Some of the essential traits in the modes of life of the producers follow from the characteristics of the type of occupation. Thus we have as varieties of this type the following combinations: grain and stock raising, dairying and agriculture, lumbering, and farming.

In this mixed type there is to be noted a transition toward a more complex social and economic life of the community.

First. There is likely to be an added element of population and social stratification by reason of the added labour power. A hired man is usually employed, or in many cases a man with his family live on the place as hired attendants.

Second. There is diversification in work which is due to the combined lines of pursuits. This is increased where either line is further diversified. This diversification is likely to take the farm residents into contact with the outside world more frequently.

Third. There is increased permanency and continuity in occupation.

Fourth. In older communities social stratification is likely to take place on lines of employer and employed. Where there are renters this forms on lines of land-owner and renters. These dividing lines tend to qualify the social institutions of the community, especially the church, the inferior classes usually dropping out.

III. FRONTIER OR PIONEER TYPE

A Northern Minnesota Community.— A marked distinction in the life of communities arises between well established and pioneer communities. By way of illustration compare the two communities as to fixity of occupation, homes, schools,

churches, cultural facilities, standards of living, manners, clothes, and ideals.

Let us take a typical community of Northern Minnesota, as an illustration of this type. It is a frontier region in the northern forests. The large pines have been logged off. Abundance of basswood, poplar, birch, etc., remain. The country is sparsely settled. Most of the residents originally homesteaded. Small lakes abound.

The livelihood of the average resident is secured by the occasional disposal of cord-wood or logs for ready money with which the scant supply of groceries, clothes, and other articles are purchased and taxes are paid. A small clearing commonly provides garden products such as potatoes, beans, various sorts of tubers other than potatoes, for family use and occasional sale. The lakes supply an abundance of fish and the forests occasional game. Fuel may be had at will from the forests.

The grain fields of the Dakotas and Canada offer an opportunity to the young single men and to some heads of families to pick up a few hundred dollars in the harvesting and threshing season. This pretty nearly finances them during the remainder of the year and discourages the harder effort of subduing the wilderness. Thus, living being relatively easy and clearing land being difficult, the reduction of the forest lands to agricultural use is exceedingly slow.

The situation has influenced the character of the people. They are generally unambitious, shiftless, undependable, and temporary. Most of them want to sell, although the land is of a fine quality and will be valuable when improved. The standards of living are low. A few clothes, a little food, and the commonest utilities in the small homes are deemed sufficient. Manners are crude and frontier, although most of the adults come from older communities. Ideals are necessarily low. All are sociable and ready to do a good turn. The dance is the leading social pastime, and the young people

walk, ride or row many miles to take part in them. Occasionally picnics are held and are well attended. Sunday School is kept up in the village church in the summer, with intermittent preaching. The church is decadent and bears little relation to present-day life. The school, with generally neat buildings and grounds, is the best kept institution in the community. Capable teachers are hard to secure. Much fervid oratory and ambitious electioneering is spent in conducting school elections. The "three R's" receive the chief emphasis in the district school.

IV. IRRIGATION COMMUNITIES

Rainfall.— In the preceding chapter attention was called to the arid region and facts relating to its general topography, climate, rainfall, and soil were given. The region is distinct agriculturally because of its deficit in precipitation and moisture, the precipitation, except in favoured sections and those generally consisting of mountain heights, being below 20 inches. The western portions of the Dakotas, Nebraska, Kansas, Oklahoma, and Texas receive from 15 to 20 inches. The larger parts of Montana, Wyoming, Southern Idaho, New Mexico, about half of Colorado, the eastern part of Arizona, and the South Central and some of Northern Utah have a rainfall of 10 to 15 inches. The Great Basin, except the drainage territory of Salt Lake, has less than 10 inches, while Southeastern California, and Southwestern Arizona have a precipitation of from 1 to 3 inches per year. The Plains and Rocky Mountain regions receive their rains in the spring and summer months suitable for crops. Most of the rains of Arizona and New Mexico also come in summer, but largely as torrential storms. In the Great Basin the larger part of the precipitation is in winter and spring, the summer being dry and hot, while that of California is wholly in the winter months. Along with low rainfall also goes a low humidity and generally

much sunshine. Agricultural conditions, save for a deficiency of water, are favourable for harvesting crops.

History.— Irrigation began with the advent into the arid regions of Mormons and miners in the late forties. Brigham Young impressed agriculture upon his followers, but outside of Utah irrigation was incidental to mining or stock raising for a long time. The irrigation "boom" took place in the late eighties and early nineties. Promoters, hoping to secure advantages of increased land values, undertook many large enterprises, the most of which failed. This boom was followed by inactivity until 1902 or 1903. The Carey law of Congress, 1894, which gave each arid state 1,000,000 acres of land on condition that irrigation be provided bore little fruit. The National reclamation law of 1902 provided for the construction of irrigation works by the Government with proceeds from the sales of public lands. This stimulated irrigation and private enterprise was renewed at about the same time. Both continued up to about 1910, when, because the National reclamation funds were exhausted and several large private undertakings had failed, irrigation again suffered a relapse.

Statistics.— The irrigation acreage increased 82.7 per cent. between 1899 and 1909, or from 6,219,958 to 13,738,485 acres. The increase in the preceding decade was 107 per cent. These figures cover both public and private undertakings. Colorado had the largest acreage in 1909, while California and Montana were second and third, respectively. In thousands of acres irrigated the acreage of the states in 1909 was as follows: Colorado 2,792, California 2,664, Montana 1,679, Idaho 1,430, Wyoming 1,133, Utah 999, Nevada 701, Oregon 686, New Mexico 461, Washington 334, Arizona 320, Nebraska 255, Texas (exclusive of land irrigated for rice growing) 164, South Dakota 63, Kansas 37, North Dakota 10, Oklahoma 4.

In the number of acres irrigated in 1909 individual and

partnership enterprise stood first with 6,257,387 acres, then commercial undertakings with 4,643,539, followed by coöperative enterprises with 1,451,806. As to source of the water supply the gravity method of securing water from streams furnished 12,763,797 acres, pumping water from wells following with 307,496 acres. Securing water by flowing artesian wells is limited by the water supply, and pumping it from streams or from wells by the cost of the process.

The per cent. of the average of all the crops produced by irrigation in 1909 was distributed by crops as follows: Alfalfa 30.6, wild, salt, or prairie grasses 21.1, oats 10.2, wheat 7.6, barley 3.3, orchard fruits and grapes 3.3, "other tame or cultivated grasses" 3.0, grains cut green 2.9, timothy alone 2.8, sugar beets 2.5, timothy and clover mixed 2.5, potatoes 2.3, corn 1.8, tropical and sub-tropical fruits 1.4, all others 4.6.

Special Problems.— There are some special problems connected with irrigation communities. First, it is difficult to secure settlers in sufficient number and of the requisite quality to utilise the land made irrigable by existing projects. Since a project demands a large outlay of capital its success depends on immediate or early utilisation. In 1912 it was estimated that only about half the acreage made available by existing projects was settled. The early settlers of irrigated land are apt to be of the pioneer type. Many of them are restless adventurers who make no permanent contribution anywhere. The kind of farmers that are needed are conservative about entering this field.

Second, speculation and appreciation of land prices beyond their normal value is a problem of many of these new communities. The profits of the early settlers are largely derived from increased land values. To obtain a share of the unearned increment becomes a very strong motive. Much of the land is held by speculators to secure profits

from the advance in price. Values are frequently advanced beyond what the land can sustain as a producing factor. Besides promoters advertise certain kinds of producing districts, such as fruit lands, by means of highly colored literature, selling the land to unsuspecting purchasers at piratical rates. Irrigated land on the average has as good a value as productive lands generally, but except in certain crops, the average value of its products is but little above that from non-irrigated land of the nation at large. Colonisation which provides for settlement through a term of years is a means of providing desirable settlers and state and national regulation is necessary to obviate exploitation.

Third, there is a need of diversification of farming and of industries in most districts. Many irrigation communities are so located that their products must be chiefly absorbed by mining populations and by the live stock of the pasture regions. Crop production must be adjusted primarily to these needs. The raising of a single crop leads to an excess which must compete with outside products in the markets. Local prices are better than those generally and competition brings a demand for a readjustment that is serious to many farmers. Further, industries which are needed by the region are desirable to supplement the agricultural activities.

Economic and Social Conditions.— There are certain economic disadvantages and advantages found in irrigation communities. Besides those just alluded to, special difficulties are arising. In the history of the world many irrigation districts have been abandoned. The actual causes of abandonment are little known. Experience in our older irrigated districts shows symptoms which may prove disturbing. The rise in the soil of alkali pursuant to flooding is one of these. It manifests itself both where too little or too much water is used and is or may become acute on nearly every tract of irrigated land. When irrigated too little the

salts accumulate in the soil and when irrigated too much they disappear in one place only to reappear in another. These disturbances produce a derangement in the nutrition of the crops.

Besides this there are other causes of a reduced productivity of irrigated land that are not well understood. In some cases the decline seems to be due to obscure diseases of the plants or to some derangement of the process of nutrition rather than to a lack of fertility.

But there are many real advantages enjoyed by irrigated lands and by developing them irrigation farming may expect to prosper. In the production of a few crops such lands have a virtual monopoly. Figs, olives, dates, and Egyptian cotton are examples. The problem of the producers is to build up a larger demand for these products. With certain other crops the market price is so high that transportation charges are almost negligible. With still other crops the certainty of production tends to offset disadvantages in transportation charges. Still other advantages are found in the ready markets furnished by grazing and mining populations, probably the largest asset.

Irrigation communities possess some social characteristics of importance. The average size of farms in the irrigated region is 86.5 acres. Consequently irrigation means intensive agriculture. Small holdings entail a compact rural society which approaches the conditions of city life, with convenient churches and schools, the best roads, telephones, free delivery of mail, and constant social interchange.

Further, coöperative enterprises are promoted. In a large project the individual cannot make his own ditch from the river or reservoir. Communal or government action is necessary. That coöperative undertakings are promoted is seen in the fact that coöperative projects stand third in the list of the chief kinds of irrigation systems. Such coöperative

projects form a common tie which binds the farmers close together and leads to other kinds of coöperation.

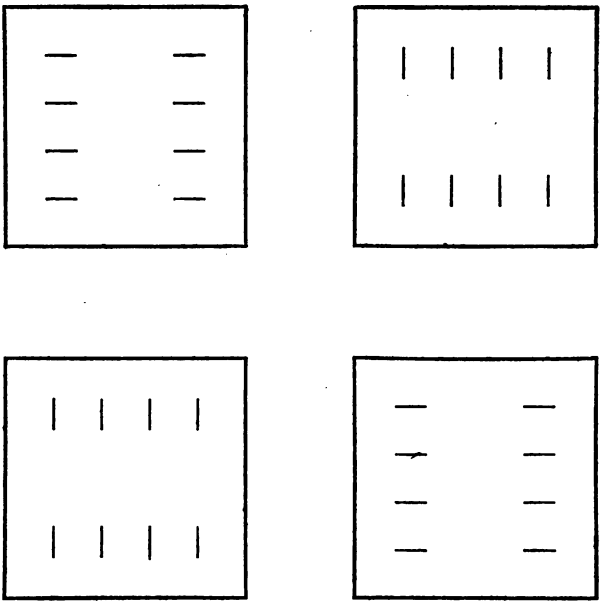
Farm Village Communities.— Within the irrigation area of the United States there is a peculiar type of community. In the summer of 1914 the author spent several weeks in Utah and for the first time became acquainted with the farm village community which the Mormons developed. Where the social and agricultural life of the Saints has been least disturbed by non-Mormon immigration such communities absorb practically all of the farming inhabitants. Not only are these farm villages to be found in Utah but also in other western states where Mormons have settled in considerable numbers.

Several motives appear to account for the formation of the early settlers of Utah into this form of organisation. First, due to the fact that the region was infested with hostile Indians there was a necessity that the pioneers be so arranged that they could quickly and easily defend themselves against the natives. Second, because of the isolation of the settlers from the larger currents of life, agencies and a system, by the operation of which they could obtain social stimulus and contentment in their position, were needful. Third, a powerful ecclesiastical motive entered also. In order to make the new faith fasten itself effectively upon the generations to come and upon the converts who would be brought in from the world without, a compact organisation was required which would mould the youth and hold the strangers. Since the Mormon Church settled its people in Utah in that period of its history when it was fighting for its life this desire to effectively provide for self-perpetuation doubtless formed the predominating motive in the formation of the farm village.

The character of the geographical district to which the Mormon pioneers went distinctly favoured this type of neigh-

bourhood. The region is arid and the major part of agriculture had to depend on the supply of moisture other than rainfall. Consequently the first extensive application of irrigation made in America by white men was initiated here. The village community is well adapted to the small farm type of agriculture which irrigation calls for because the farmer need travel but a short distance between his home and his work.

In one of the buildings of the Agricultural College at Logan, Utah, hangs a chart exhibiting the plan of the farm village as devised by Brigham Young. The accompanying diagram represents the essential features of the plan relative to arrangement of homes.



PLAN OF UTAH FARM VILLAGE

The streets of the villages are six rods in width and their gutters contain running water brought from irrigation

ditches. Each block contains about ten acres and is divided into eight lots. Thus each plot containing a home covers from an acre to one and one-fourth acres of land. The houses are arranged upon opposite blocks so that in no case do they face each other, thus securing privacy.

Besides homes, the farm village contains mercantile establishments, shops, the school, and the church. It possesses the industrial, educational, religious, sociability, and cultural agencies which are commonly found only in strictly urban communities. There is a neighbourhood life with its appeals and its advantages. Under the method of irrigation the home plot of ground in many cases has proven sufficient for the entire support of a family. The land immediately adjoining the village is divided into small fields of five or ten acres each and that farther removed consists of larger tracts. The original custom provided that a family should possess, besides the home plot, a tract in each of the other districts. This practice is still adhered to in considerable measure. A distant pasture affords grazing for the town herd which is gathered, driven, and distributed by some of the boys. Thus the various influences have conspired to segregate farmers in the villages, and in Cache Valley, Utah, very few agriculturists live apart on farms.

In many respects the farm village church constitutes a real community or social centre. The vision of the pioneer Mormon leaders envisaged the varied needs of vigorous people and incorporated provisions in the church organisation to meet them. The church building, as well as the church organisation and the point of view of the inhabitants, testify to this. Not only is the church the centre of religious life but also of recreational and amusement activities. It is built and equipped for their realisation. Some one large room is provided with movable seats which may be removed or arranged to meet requirements. The Mormons have always believed in dancing and the community meets frequently for

this purpose. Good music has been appreciated from the beginning and choral singing is housed and promoted. The church is a playhouse for the children and it is sought to provide suitable games. Sociables, feasts, lectures, and other community requirements are welcomed and furthered. The schools are housed in good buildings and the people hold education in high regard. Thus these farm villages have done much to overcome farm isolation, to provide wholesome community life, and to build a satisfying agricultural civilisation.

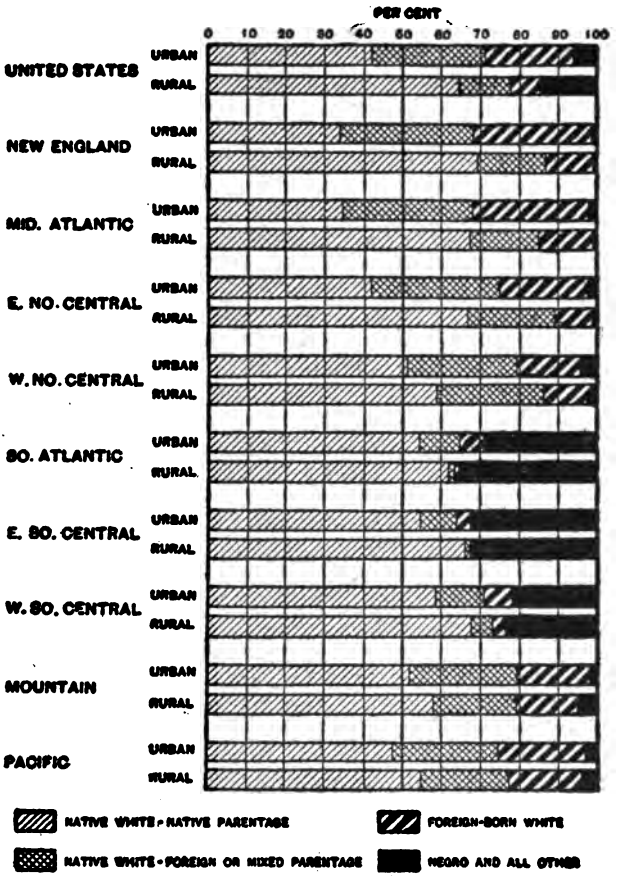
V. RURAL IMMIGRANT COMMUNITIES

Where Immigrants Settle.— Immigration has been a large factor in the United States for a long time. After the original migration to this continent foreigners slighted it until about 1830. Since then there has been a steadily increasing volume of immigration, until at the present time we are receiving a net decennial immigration of over 5,000,000 persons. At the present time about one in seven of our population is foreign born. It would be expected that large numbers of these people settle in rural communities. Such is the case but not to the extent which one might anticipate. Of the 13,345,545 persons of foreign birth who lived in the nation in 1910 but 3,710,176 were classed as rural, or 27.8 per cent. Since considerable of the rural population lives in incorporated places of 2,500 people or less, the proportion must be still smaller.

It is noteworthy that immigrants to the country are unequally distributed over the United States as a whole as they are in cities. This fact is brought out by the accompanying pictogram (Pictogram 1), which is taken from the Abstract of the 13th Census. An inspection of the graph shows that the rural districts of the South have almost a negligible percentage of foreigners. Even were those born of foreign or mixed parents considered, the showing would be little better.

PICTOGRAM I

COLOR OR RACE, NATIVITY, AND PARENTAGE IN URBAN AND RURAL COMMUNITIES: 1910



(Abstract Thirteenth Census, p. 91).

By divisions the percentage of foreign born who live in rural regions are as follows: New England 7.6, Middle Atlantic 16.1, East North Central 28.6, West North Central 60.8, South Atlantic 34.0, East South Central 33.3, West

South Central 60.8, Mountain 60.3, Pacific 38.7. Only one division, the West North Central, having a high percentage actually receives a large number of foreigners.

Nativity of Farm Operators.— The statistics pertaining to farm operators and tenure helps give a perspective of the rural immigrant situation. The accompanying table (Table 1) taken from the Census Abstract shows that the foreign

TABLE 1

NATIVITY OF FARM OPERATORS: 1910

DIVISION.	PER CENT. OF ALL FARM OPERATORS.			PER CENT. OF FARM OWNERS.			PER CENT. OF FARM TENANTS.		
	Native whites.	Foreign-born whites.	Negroes and other nonwhites.	Native whites.	Foreign-born whites	Negroes and other nonwhites.	Native whites.	Foreign-born whites.	Negroes and other nonwhites.
United States...	75.0	10.5	14.5	80.1	13.8	6.1	66.2	5.0	28.8
New England	85.3	14.5	0.2	85.6	14.2	0.2	82.6	17.1	0.3
Middle Atlantic...	89.5	10.1	0.4	89.1	10.5	0.4	91.1	8.4	0.5
East North Central	82.7	16.7	0.5	79.9	19.7	0.5	90.3	9.1	0.6
West North Central	74.8	24.3	0.9	70.4	28.6	1.0	84.4	14.9	0.7
South Atlantic....	67.4	0.6	32.0	81.8	1.0	17.2	50.2	0.2	49.6
East South Central	68.3	0.5	31.2	87.7	0.8	11.5	49.5	0.2	50.4
West South Central	73.4	4.4	22.2	81.0	5.9	13.1	66.6	3.1	30.4
Mountain	78.5	17.1	4.4	78.0	17.2	4.8	81.7	16.7	1.7
Pacific	69.8	27.7	2.5	69.9	28.7	1.4	67.9	24.1	8.0

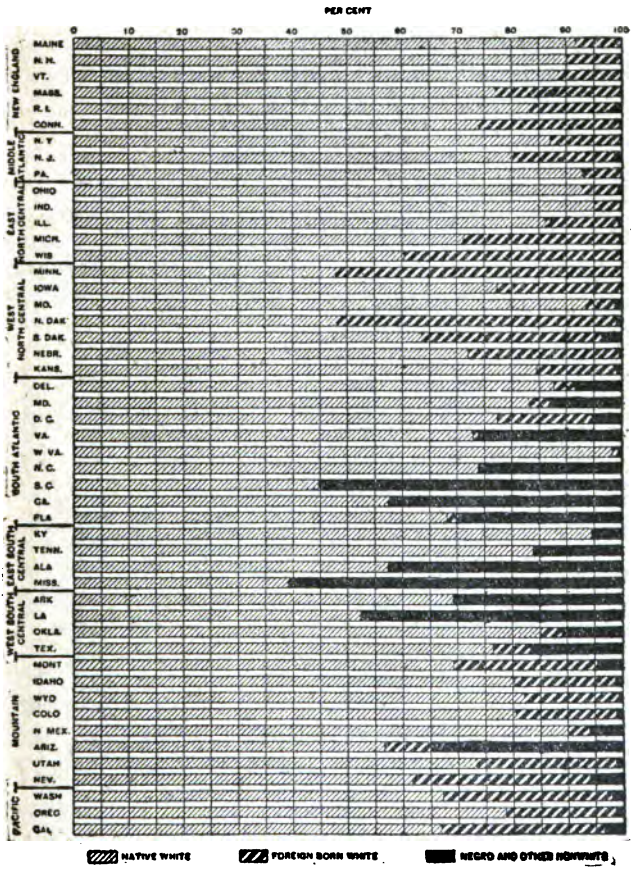
(Abstract Thirteenth Census, p. 296).

born constitute but 10.5 per cent. of the farm operators of the nation. In two of the southern divisions there are almost none, in the Pacific and West North Central they form 25 per cent. or more of farmers.

The states which have the largest number of foreign farm operators are shown in Pictogram 2, which is borrowed from the Abstract of the last Census. Minnesota and North Da-

PICTOGRAM II

NUMBER OF FARMS, CLASSIFIED BY COLOR AND NATIVITY OF OPERATOR: 1910



(Abstract Thirteenth Census, p. 296).

kota lead with over one-half their farmers foreign born. The southern states indicate little or none, while some of the Montana and Pacific states rank as high as or above the northeastern states.

It is interesting to note the status of foreign born farm-

ers as to land tenure. This is denoted in table 2. For the United States at large foreign born farmers show a larger percentage of owners than native born farmers, 81.4 and 66.3 per cent. respectively. In only one of the geographical divisions, New England, does foreign born ownership fall below native born. Native born farmers best hold

TABLE 2

FARM TENURE BY NATIVITY

DIVISION.	PER CENT. OF NATIVE WHITE FARM OPERATORS.			PER CENT. OF FOREIGN-BORN WHITE FARM OPERATORS.			PER CENT. OF NEGRO AND OTHER NON-WHITE FARM OPERATORS.		
	Owners.	Tenants.	Managers.	Owners.	Tenants.	Managers.	Owners.	Tenants.	Managers.
United States.....	66.3	32.7	1.0	81.4	17.6	1.0	26.2	73.6	0.2
New England	89.6	7.7	2.7	87.2	9.3	3.5	79.2	15.2	5.6
Middle Atlantic	75.4	22.7	1.9	79.0	18.6	2.4	72.1	24.2	3.7
East North Central..	69.5	29.5	1.0	84.6	14.7	0.7	68.4	30.3	1.3
West North Central..	64.3	34.8	0.9	80.7	18.9	0.4	74.7	24.5	0.8
South Atlantic	64.8	34.2	1.0	84.9	11.7	3.4	28.7	71.1	0.2
East South Central..	62.9	36.7	0.4	81.1	17.8	1.2	18.1	81.9	0.1
West South Central..	51.6	47.8	0.6	62.7	36.8	0.5	27.6	72.3	0.1
Mountain	87.1	11.2	1.7	88.3	10.4	1.3	95.6	4.1	0.3
Pacific	80.1	16.8	3.1	83.1	15.0	1.9	43.8	54.5	1.7

(Abstract Thirteenth Census, p. 296).

their own in the West, next to New England. It would seem that the nation need have no fear that immigrants who settle on farms will fall into tenancy. It should rather fear that native farmers be eliminated by foreigners, though that fear may be ungrounded.

Old and New Immigration.— There is a vast difference between the earlier and later immigration as to their contribution to farm life. The older immigration, at least in

its earlier period, was essentially agricultural, while the present additions from eastern and southern Europe go to the farms but little. The present distribution of foreign born farmers by nations of birth brings this difference into relief. Of all foreign born farmers in the United States, Germany contributed 33.13 per cent., Scandinavian countries 23.24, Great Britain and Ireland 13.07, Canada 9.24, Austria 4.98, and Denmark 4.24. Austria is the only one of these nations whose immigration is recent. The other newer contributors have percentages as follows: Hungary 0.57, Italy 1.59, Russia 3.85, Poland 1.08.[1]

This disinclination of the more recent kind of immigrants to settle in the country is remarkable when it is considered that the majority of them come from rural regions and have been either owners of small farms or farm laborers; perhaps also that farm labor in the United States is scarce, at least at seasons. The other side of this is the city and national feature. How little these agrarian immigrants are fitted to take up city life and occupations and what a problem this unfitness becomes to the cities and ultimately to the nation! In its national aspect this problem ultimately rests on country as well as city.

There are several sufficient reasons why the newer immigrants for most part settle in cities. First, they are ignorant of the national tongue and must be immediately dependent on their own countrymen for intercourse. This leads to segregation in cities. Second, cities inherently are attractive to the masses. Once located in the city the charm of living in great masses has the force of a binding chain. Third, the motive of perhaps the majority of the recent immigrants in coming to America is to make money quickly and then to return home. There is a mortgage to lift, a small farm or business to purchase, and so on, for which a small amount of ready cash will suffice. About 40 per

[1] Thirteenth Census, Vol. V, p. 178.

cent. of our immigrants return to Europe year by year, and no doubt this represents but a portion of those who come expecting to do so. Almost 40 per cent. of those who return to Europe remain here less than 5 years, about 24 per cent. from 5 to 10 years, and about 80 per cent. remain here less than 20 years.[2] Fourth, the great majority of immigrants are poor and must have work at once. Being unacquainted with the nation at large, with no knowledge of where to look for farm work, employment is sought in the city. That there is an interest in farm work is indicated by the report of the National Bureau of Information and Naturalisation. In the year ending June 30, 1912, 5,951 immigrants sought information about farming, 77 as farmers, the rest as farm labourers. One thousand, two hundred and sixty of these labourers were German, 1,213 Polish, 573 Russian, 403 Swedish, 388 Irish, 317 Danish.[3] Fifth, immigrant labourers are subject to two drawbacks which repel them from the country. One of these is competition with negro labour in the South. This is both economic competition and social repulsion. Of the two the latter is the worse. In so far as labour is a social caste because of the fact of original servile labour, all labour tends to be estimated on that basis. The other deterrent is the wide distribution of seasonal labour in agriculture. It is not inviting financially to have work a few months and be forced to be idle the rest of the year. Sixth, agriculture in America is quite different from that in Europe. Some of the crops are different, such as cotton, corn, tobacco. We pursue expansive farming. Not only is large capital required but the method in itself is an art. Further, many of the European farmers are specialised as to crops. A vine grower exclusively cannot do much else in agriculture.

Agricultural Immigrants.— The older agricultural immi-

[2] Jenks and Lauck, "The Immigration Problem," p. 497.

[3] Rep. Com. Gen. of Immigration, 1912, pp. 211–12.

grants settled in the North Central states for most part, and built up many large communities. Thus we have settlements made up wholly of Germans in Wisconsin, Kansas, and other states, while in Minnesota and the Dakotas, Scandinavian settlements abound, especially those of Norwegians. After the first shock of having to get started in a new land has disappeared these communities generally furnish as high grade agricultural life as those of native Americans. Some European customs and institutions are retained during a generation or two, but not to the detriment of our civilisation. What is said of those nationalities mentioned is also true of Swiss, English, and other Northwest European immigrants.

Something may be said of the communities of the new immigrants, although the total number of such communities relative to national agriculture communities is insignificant. The Poles may serve to typify agricultural communities made by central European immigrants. Only about one in a hundred immigrant Poles goes into agriculture. The older settlers took up new lands in the northern states, a few in Texas. They made independent and self-reliant pioneers, learning by observation, the later generations improving on the first. In the older colonies the standard of living is rising. Formerly wilderness lands have been placed almost entirely under cultivation and made to produce profitably. Because the Poles love land they desire to become owners rather than labourers. They adapt their crops to the prevailing economic demands and change them as the demands change. They raise potatoes in Portage County, Wisconsin, cotton in Texas, specialise in garden crops and tobacco in New England.

The Italians may be taken to represent southern European immigration. Only about one and a half per cent. go into agriculture. They do not confine themselves to any one state or division. Thus even the south Italians are found

from Wisconsin to Louisiana and from New England to Texas. Because they love companionship they do not make as good pioneers as some other nationalities, but they are successful farmers and truckers where they can live in a group of their own kind. While on this account they tend to retain their own customs and resist assimilation, yet when given an opportunity to mix with American life they are much more progressive than are the Poles. While they may not make large contributions to agricultural methods, they are adepts at hand labour in farming, will perform hard monotonous work, and have redeemed land that was considered worthless.

In the South most of the Italians are Sicilians. The largest Italian agricultural colony is at Bayou, Texas, that one numbering about 1,700 persons. Arkansas and Louisiana also have important settlements. They tend to specialise in agriculture, such as producing strawberries in Louisiana. Italian labour is esteemed by cotton and sugar planters.

A considerable number of Italians have gone onto farms in New York, especially Western New York. Some New York Italians have purchased farms from their savings in this country. They do not engage in general farming extensively because they do not understand the care of live stock and the methods of producing staple crops. They successfully produce crops like onions and celery on small farms of 15 to 20 acres. They dislike employing labour and the size of the undertaking varies with the size of the family.

In conclusion it may be said that perhaps the most hopeful feature connected with the newer immigrant communities is not in their extent or what they have realised, but it is in their forming nuclear colonies which are to act as the foster mothers and promoters of others to come.

VI. BACKWARD COMMUNITIES

Their Nature and Location.— In various parts of the United States are communities which may be termed backward. Like the others which have been treated, historical, physical, and topographical conditions have conspired to make them what they are. Such communities may be identical with other kinds in certain cases. Thus we might have a stagnant corn community, stagnant cotton community, or other form of stagnant neighbourhood.

Examples of these communities are found in New England, isolated from the larger world in the pockets of the hills; in the hills and mountains of Arkansas and Missouri where the pioneer type of past generations persist; in the adjoining mountain regions of Kentucky, Tennessee, West Virginia, Virginia, North Carolina, Alabama, and Georgia. The latter embrace the famous people now known as the "mountain whites." Those of Missouri and Arkansas resemble them in all essential characteristics, and doubtless migrated from the same general region and stock three-quarters of a century ago. New York and other states both east and west contain similar communities. "Dead villages" so widely scattered over the land also may be classed with them.

The decadence of New England agriculture as a pathological condition has probably been exaggerated. The regret so manifest over abandoned farms in the East is largely sentimental, rather than based on economic reasons. The buildings are old, ill adapted, and often deserted because of farm consolidation. Thus in the worst township in New York an investigation showed that there were 45 deserted farmhouses in the 45 square miles, which was due to the fact that these farms had been consolidated with others. The farms are in size and adaptation traditional rather than social and economic. War or early settlements made them small — probably too small for competitive purposes. Due to diversifica-

tion, the eastern states lead the United States in the number of products produced and in their value per acre.

The Mountain Whites.— As an example, the most extensive and notable backward community in the United States will be described in some fulness. As before noted, the mountain whites of the South occupy the adjacent portion of eight states, embracing a region of some two or three million acres. This region is elevated and mountainous, rich in timber and mineral deposits, and has been called aptly "Appalachian America." Big Sandy, Licking, Kentucky, and Cumberland rivers rise there as "creeks" and flow out; brawling torrents in winter, almost dry in summer. These streams with their tributaries divide the country into long, narrow valleys with their intervening mountain ranges. Travel follows the streams. It is said that no steamboat can penetrate into the Kentucky mountains. Until recently there was no railroad in the region. There does not exist a single well-made wagon road.

There are two explanations of the origin of the people of this region, who are so different from the mass of our American citizenship as to have gained the characterisation of "our contemporary ancestors," and to have won for the large region the title of "a retarded frontier." One explanation derives them from the redemptioners of Colonial times who, when set free by their masters, would not remain among them to mix with negro labourers, but pushed into the upland regions and, separated by mountain barriers, were lost to the influences and view of civilisation.

The other account makes them descendants of the Colonial German, Scotch, and French settlers, who pushed into the region before the Revolutionary War and settled the elevated plateau. The persistence of many Old English words and phrases has been the justification for the belief that their ancestors were redemptioners. Kephart, in a recent volume, "Our Southern Highlanders," presents proof that the

"highlanders" were originally chiefly Scotch who were persecuted and evicted from Ulster and who migrated into the southern highlands by way of Pennsylvania. They were accompanied into the latter region by a modicum of French and Germans from the Keystone state.

In speech they touch a remote past. There are no dialects, but old words with their earlier meanings are preserved in abundance. Many words came down from the time of Chaucer.

The chief occupations of the mountain whites are agriculture, distilling, and logging. Corn, oats, and potatoes are the principal crops. Tobacco, flax, and cotton are minor crops. Small yields are made because of the sterile soil and poor markets. Farms are classed as valley, bottom, and hillside. The latter kind are so nearly perpendicular that local legend says a man fell "out of his field and broke his neck." Unless it is forest or mineral, land is worth from $3 to $7 per acre. Bottom farms rent for one-half, hillside for one-third the yield, or 50 cents per acre.

Distilling corn, rye, and apples into "moonshine" whiskey formerly afforded about the only markets for those products. This, together with a strong taste for intoxicants and a lack of social intercourse, accounts for the previous practice of moonshining. Logging is an avenue of activity. In 1890 this section of country contained one of the best hardwood forests. Much of the forest supply has been exhausted.

In customs and beliefs as well as in vestiges of language the inhabitants we are discussing speak of the past. The feud is one of the more vicious forms of ancient customs which survive. A suggestion has been made recently that this mode of conflict had its origin in the guerrilla conditions which prevailed as a consequence of the Civil War. Based on the law of blood revenge, as it is, it frequently becomes so bitter that whole families are exterminated in the course of its operation. The use of intoxicants intensifies its influence. This is

coming to be recognised and there is a rising sentiment against "moonshining," as well as a passage of restriction laws.

The beliefs and views of these mountaineers come down from long ago. The Bible is taken literally, and the tribal and primitive doctrines and practices of the first few books of the Old Testament hold the preference over the ethical teachings of the later prophets and of Jesus. The earth is often supposed to be square, the sun to swing around the earth, the Mexican War and Civil War are alluded to by old men as recent history. Education is backward. Isolation discourages social intercourse or the progressive kind of neighbourhood coöperation. Hospitality for the traveller abounds until abused.

REFERENCES

MacClintock, S. S. "Kentucky Mountaineers and Their Feuds." *American Journal of Sociology*, Vol. VII, pp. 1–28 and 171–87.

"Rebound of the Upland South," *World's Work*, Vol. XIV, p. 8961.

Bailey, L. H. "The Agricultural Shift." "The State and the Farmer," pp. 5–54.

Fleming, Walter L. "Reorganization of the Industrial System in Alabama after the Civil War." *American Journal of Sociology*, Vol. X, pp. 473–499.

Turner. "The Significance of the Frontier in American History," "Bullock's Selected Readings in Economics," Chap. 2.

Small and Vincent. "The Rural Group." "Introduction to Society," Book II, Chap. 2; "The Family on the Farm," Chap. 1.

U. S. Census, Vol. V, pp. 827–876, "Irrigation."

"Year Book," Dep. Agriculture, 1910, 1911 and 1912, Articles on "Irrigation," by Carl S. Scofield.

Brigham. "Geographic Influences in American History," Chap. 8, "Where Little Rain Falls."

Bowman. "Forest Physiography," Part II.

Proceedings National Irrigation Congress.

Abstract Thirteenth Census.

Thirteenth Census, Vols. I and V.

Fairchild. "Immigration."

Jenks and Lauck. "The Immigration Problem."

Annual Reports of the Commissioner General of Immigration.

Kephart. "Our Southern Highlanders."

Du Bois, W. E. B. "Negro Land Holders in Georgia." "U. S. Labor Bulletin" No. 35, pp. 335ff.; "The Negro Farmer," "Supplementary Analysis of the 12th Census," pp. 511–579.

"Poor Whites: New Race Question," *Arena*, Vol. XXVII, p. 352.

"Southern Mountaineers," *Scribners*, Vol. XXIX, pp. 387–99 and 556–70. Widtsoe, J. H., Principles of Irrigation Practice.

CHAPTER V

RURAL AND URBAN INCREASE [1]

It is commonly estimated that the cities of the United States are built up in population at the expense of the country. If this is so it must have a very important bearing on the "rural problem." In so far as it is true, to that extent it is a factor to be considered in relation to the latter.

It is the business of this chapter to demonstrate the degree of the movement from country to city, to indicate what the significance of this movement is for rural communities, to seek its more trenchant causes, and to touch upon preventive agencies.

I. FACTS AS TO THE DRIFT TO CITIES

The Fact of City Growth.— In the beginning it is necessary to examine the fact of city drift as a fact. First, it is a fact. In 1900, 31.1 per cent. of the population of the United States lived in cities of 8,000 or more persons, while in 1790 there were but 3.3 per cent. of such urbanites. There were 6 cities of 8,000 inhabitants in 1790, 545 in 1900. There was no increase in the number of such places until the census of 1810. Then the increase in such places by decades was 5, 2, 13, 18, 41, 56, 85, 60, 161, 98.[2]

Reckoning all places of 2,500 inhabitants or more as urban, which is now the practice of the United States Census

[1] The substance of this paper appeared in the *Quarterly Journal of the University of North Dakota* for October, 1910, and January, 1911, under the title "City Trend of Population and Leadership," and in the *Amer. J. Soc.*, March, 1911, as "The Drift to the City in Relation to the Rural Problem."

[2] *Eleventh Census*, 1900, Vol. I, Table XXIX.

Bureau, in 1910 46.3 per cent. of our people were urban as compared with 36.1 in 1890 and 40.5 in 1900; while 53.7 per cent. were rural in comparison with 63.9 per cent. in 1890 and 59.5, in 1900.[3]

Decline in Rural Population.— Alarm over rural depopulation is almost as old as history. Xenophon complained that the Greeks loved the city rather than the village. Varro was sarcastic in his testimony that the Romans preferred the Circus to the corn-field. The elder Mirabeau was eloquent in his recommendations of country life and pathetic in describing the condition of country people who moved to town. English poets and politicians lamented the depopulation of rural England in the middle period of English history, but the movement went on for centuries and still goes on. English farms are in want of farm labour.

France is alarmed at the depopulation of her rural regions. One of the rich departments has lost population since 1851, about 12 per cent. in 50 years. The rate since 1891 has increased 50 per cent., although the period was very prosperous. The rural population for the whole of France decreased 16⅔ per cent. between 1846-1906.

Germany has an agricultural party. It is much stirred over the drift away from the country and blames every one heartily for it: — the manufacturer for holding out false inducements about pay; the government because the state railways coax the farmers away from the land by means of commuter trains, permitting people to live in the country but leaving their interests in the city.[4]

We find that one of the great objects of rural credit legislation in France is to keep rural population from drifting to the cities. This is especially true of its short-time and

[3] Abstract of Thirteenth Census, p. 55.

[4] "The Decline in Rural Population," B. H. Hibbard, *Amer. Stat. Assn.* Mch. 1912, pp. 85–6.

personal credit provisions. It is desired to bind the small peasant to the soil.[5]

In view of these facts it is not remarkable that rural depopulation in the United States should occur. Perhaps the most notable fact in connection with the occurrence is that it should take place in a nation that is as yet agriculturally undeveloped. However, as we shall see, it is the opening up of new agricultural regions that in part accounts for the loss of country inhabitants.

Relativity of Rural Loss.— Decrease of rural population is relative, not actual, for the country as a whole. The actual loss of rural population is small. In the North Atlantic division from 1890 to 1900 there was a net loss of 238,865, three states having gained 86,943, while six states lost 325,808 rural inhabitants. In the South Atlantic division there was a gain of 830,739 for country districts, only one state, Delaware, having lost, to the extent of 2,404 persons. The North Central division had a rural gain to its credit of 458,149, notwithstanding the fact that five of its states sustained a rural loss of 138,315 inhabitants. The South Central and Western Divisions showed large net rural gains, the former gaining 67.7 per cent. in the decade, the latter 36.9 per cent.[6] Maine sustained a rural loss of 13.3 per cent. of its total increase of population; New Hampshire 44.9; Vermont 214.9; Massachusetts 2.2; New York 16.4; New Jersey 13.9; Delaware 14.8; Nebraska 125.2; Kansas 51.0; Ohio 17.1; Indiana 0.1; and Illinois 2.9 per cent. In the case of Kansas and Nebraska the rural decrease was of a temporary nature, being due to droughts in the western ends of those states in the earlier part of the decade.

The following states are shown to have lost rural population in the decade 1900–1910, measured in per cent.: New

[5] U. S. Report on Agricultural Co-operation and Rural Credit in Europe, p. 645–664.

[6] *Twelfth Census*, Vol. I, Table XXXVI.

Hampshire 5.4; Vermont 4.2; Ohio 1.3; Indiana 5.1; Iowa 7.2; and Missouri 3.5. Two divisions show a loss. New England declined in rural population 0.5 per cent. and the East North Central Division, less than one-tenth of one per cent.[7]

New England Rural Depopulation.— The Census enumerates towns of less than 2,500 inhabitants as rural. But in New England this does not show the real conditions, for many of them are engaged in industrial pursuits. Many of these places are very small — 87 out of 202 in Massachusetts have less than 1,000 population; 70 per cent. of the 209 rural towns of New Hampshire have under 1,000.

On the other hand, many places of over 2,500 have rural dwellers. A closer study shows that other than industrial towns have lost population. The story is old, beginning with the opening of the Connecticut Western Reserve.

The four Western Massachusetts counties may be regarded as typical of New England. The district includes the Connecticut Valley, the Berkshire Hills, and small sections of the eastern highlands. Sixty-two of the 79 towns have decreased in population since 1890. Two of the four that had not lost population are exempted by recent rural immigration, one by reason of new trolley lines and country-home movement, and one because of new industries. Seventy-one per cent. of the 62 towns attained their greatest population in 1850; 40 per cent. in 1820; 16 per cent. in 1800; five towns in 1790; only six towns between 1880 and 1910. Their total population in 1910 was 41,865; when at their maximum numbers it was 82,860, a decrease of nearly 50 per cent.

The smaller, rougher, commercially isolated towns have suffered most, some have ⅓ their former number. Very few have recovered from their early decline either in numbers or productiveness. Their vital statistics show the native

[7] Abstract of Thirteenth Census, p. 57.

stock is dying out. "There is little or no immigration and the deaths exceed the births. In such towns agriculture is usually primitive and decadent. Great tracts of rough land, formerly cultivated in grain or tame pasture, have been allowed to grow up to white pine and chestnut sprouts and the numerous cellar holes, found here and there through the wooded areas, marking the original sites of farm homes, attest a former prosperity that has now become merely a recollection." Former competition with Western lands and later competition with cities tell the tale. The greatest cause has been the comparative unprofitableness of agriculture. "To retain the rural population there must be a reorganisation of agriculture. Some readjustments must be made to insure reasonable rewards and a better living. Failing that, the native rural people must give place to a farming population with a lower standard of living or greater capacity for sustained and disagreeable exertion."

Reorganization of agriculture has made slight inroads on the outward movement. "In Northern Maine, Western Massachusetts, and parts of the Connecticut Valley, where specialised crops such as potatoes, onions, or tobacco are grown," the return tide has set in.

While rural immigrants have done something to resettle these abandoned regions, it is probable that they cannot wholly succeed. They have not the modern ideas of agriculture which are required to make the undertaking successful. "The towns that have suffered the greatest comparative losses can be recuperated only by such a reorganisation of the agricultural industry as shall adapt the soil to its most profitable uses by the application of scientific knowledge, the development of transportation facilites and the betterment of conditions of rural living."

The "back to the land" movement in New England is chiefly a summer-home affair. "Old homesteads have become gentlemen's estates, or show places, few of them de-

voted to productive agriculture. But real estate has advanced in value in favoured localities from 50 to 100 per cent. in a few years." [8]

Permanency of City Increase.— The tendency toward the relative decrease of rural and the relative increase of urban population seems likely to continue, judging from decennial statistics. The increase of population of cities of 8,000 or more inhabitants from 1790 to 1820 was 50.9 per cent., from 1820 to 1850 it was 83.1 per cent., from 1850 to 1880 it was 58.4, from 1880 to 1900 it was 48.6. The percentage of increase of city populations touched its maximum from 1840 to 1850 when it registered 99.3 per cent. The other highest point was between 1820 and 1830 when the per cent. was 82.0. The average since 1850 has been 53.5 while before 1820 it was but 50.9 per cent. While we may not witness another such spurt in city increase as that between 1820 and 1850, we find little encouragement from the record to expect a near decline.

Conversely, the percentage of increase of rural population has steadily decreased. The percentages run as follows: from 1790 to 1820, 34.1; 1820 to 1850, 30.3; 1850 to 1880, 24.2; 1880 to 1900, 14.3; 1900 to 1910, 11.2 per cent. The decade from 1870 to 1880 shows the only increase in the rate, one from 15.6 to 27.2. But in the two following decades it falls to 14.5 and 14.1.

The ratio of increase of city to rural population was 1.6 per cent. from 1790 to 1820, 2.7 from 1820 to 1850, 2.6 from 1850 to 1880, 3.4 from 1880 to 1900.[9]

Industrial Nature of City Gain.— The increase of city as against rural population is localised. It is connected with industrial regions or regions becoming industrialised. The

[8] "The Decline of the Rural Population in New England," A. E. Cance, *Am. Stat. Assn.* March, 1912, pp. 96–101.

[9] *Census Bulletin No.* 4, 1903, Table XXIII; and Abstract Thirteenth Census, p. 57.

facts given above on rural losses show that they occurred in the North Atlantic and North Central states almost exclusively. The most industrialised states have the largest percentages of urbanites: Rhode Island 96.7, Massachusetts 92.8, New York 78.8, and so on, while southern and western states have small ones: Kansas 29.2, Mississippi 11.5, Tennessee 20.2. For recent times the law could be safely formulated: the increase in rural population is in inverse and that in urban population is in direct proportion to the degree of industrialisation.

The industrial motive of immigration may be indicated further by noting the distribution of cities. The following table indicates the number of places of over 5,000 and of over 10,000 inhabitants by divisions and by more general regions. When it is remembered that the areas of the more western and northern regions are relatively much greater than those of the northeastern sections, that cities of the former regions represent much the smaller portion of their population, and that places of 10,000 or more inhabitants represent more or less industrial developments, the conclusion is evident that the northeastern cities are closely associated with industrialisation.

TABLE 3

DISTRIBUTION OF CITIES

Number of places of	Over 5000	Over 10,000
New England	209	103
Middle Atlantic	276	146
East North Central	290	103
West North Central	126	55
South Atlantic	105	47
East South Central	59	26
West South Central	73	40
Mountain	43	18
Pacific	50	31
North	901	440
South	237	113
West	93	49
East of Mississippi	939	458
West of Mississippi	282	144

The impetus which industrialisation gives to urbanisation is strikingly shown by comparing the percentage of population living in cities of the several classes in the different divisions at the Census of 1880 and 1910. Denoting places of 100,000 or more inhabitants as A, those of 25,000 to 100,000 as B, those of 10,000 to 25,000 as C, those of 5,000 to 10,000 as D, and those of 2,500 to 5,000 as E, we find that between those dates the division varied in percentages, as follows.

TABLE 4

INCREASE OF URBAN POPULATION BY DIVISIONS

	A	B	C	D	E
New England	11.7—24.5	14.6—25.0	16.0—14.3	10.6—11.3	15.8—8.2
Middle Atlantic	30.4—44.5	7.2—10.9	4.3—7.0	4.6—4.5	3.4—4.1
East N. Central	10.3—26.1	3.4—8.5	4.5—7.6	4.3—6.0	5.0—4.5
West N. Central	5.7—13.5	3.4—6.9	3.4—3.9	2.4—4.3	3.3—4.7
South Atlantic	6.7— 9.6	3.4—5.8	2.2—3.6	1.6—3.3	1.2—3.0
East S. Central	2.2— 7.1	2.4—3.4	1.4—2.6	1.3—2.7	1.1—2.8
West S. Central	6.5— 3.9	*3.3—7.2	2.5—4.0	1.2—2.6	2.0—4.5
Mountain	8.8— 8.1	5.5—8.8	7.1—5.5	3.8—6.6	7.3—7.0
Pacific	21.0—34.2	3.1—6.4	6.6—7.3	1.0—3.2	4.5—5.7

* 1890.

(Thirteenth Census Population, Vol. p. 46-7.)

II. SOURCES OF CITY GROWTH

In consideration of the fact that modern populations possess a large degree of fluidity both within the confines of particular nations of the more advanced type and between nation and nation it would not be safe to assume that the cities of America have gained their inhabitants at the entire expense of country districts. We have shown that certain rural regions sustain actual losses of people but we would have to prove that the equivalent number above city gains from all other directions had been absorbed by cities before we could assert that the rural migrants had been stolen by urban communities. Our recourse must be to statistics.

There are four possible modes of swelling urban popula-

tion: by excess of births over deaths, by migration from farms, by immigration, and by incorporation of cities. The following table, Table 5, gives a summary of the factors contributing to city growth and the contributing force of each factor in per cents. This table is followed by an explanation of the methods by which the results were obtained.

TABLE 5

SOURCES OF URBAN GROWTH, UNITED STATES, 1900–1910.

	Number	Per cent. of urban increase
Urban gain, 1900–1910, as per census	11,826,000	
Accounted for by immigration	4,866,000	41
Accounted for by natural increase of population	2,509,000	21.6
Accounted for by incorporation of new territory with urban territory	924,000	7.6
Balance, migration from rural to urban districts	3,527,000	29.8

Natural Increase.— Before it is possible to measure the contributing force to urban increase of rural migration and immigration it is necessary to discover what is contributed by natural increase. A rough approximation is secured by dividing the amount of population in 1900 by the difference between the total national increase which took place in the succeeding 10 years and the net immigration for the same period. But a modification must be made to get a truer estimate. For during the decade children were born to the immigrants, some of the children died, and many immigrants died who would have been counted had they lived and who contributed children to the population. This natural increase of population by immigrants should not be attributed to the national population of 1900. Besides this there was an emigration of approximately 550,000, or with its natural increase, 588,000.

The population of continental United States in 1900 was approximately 76,000,000, and its actual increase by 1910

was 15,975,000. Decreasing the gain by 5,566,000 to cover the excess of immigration and the net natural increase of this immigration over emigration, the difference amounts to 13.7 per cent. of the population of 1900. This is the rate of natural increase.

The substantial accuracy of this rate is vouched for by employing another method to arrive at the natural increase of population. This is based on an estimate of the birth rate of the national population and the use of the mortality rate given by the government mortality reports. The number of children under 5 years of age in urban communities in 1910 was 4,200,000 in round numbers. This represents 86 per cent. of those born. This rate is obtained by taking the average death rate from a probability curve made from the data contained in recently published life tables (American Life Tables, C. H. Forsyth, Am. Stat. Association, Sept., 1914, p. 234). The entire number of children born was 4,880,000. Dividing this number by the estimated urban population midway between 1907 and 1908, to get the average age of the children of the five year age group, the birth rate per year of 2.47 is obtained, which, converted into a decennial rate, became 24.7. Treating the rural five year age group and the correlative population in the same manner, a rural birth rate of 30.36 for the decade is obtained.

The average mortality rate for urban districts of the registration area of the nation is found to be 15.9; that for rural districts, 13.4. Subtracting the mortality rates in each case from the appropriate birth rates there is obtained a natural increase rate for urban districts of 8.8 per cent. and a rural rate of 16.96. Since the population of the registration area constitutes nearly 60 per cent. of the national population it may be assumed that these rates represent the total urban and rural populations. Employing the method of weighted average, a natural increase rate for the

whole nation is obtained by this method of 13.68, or practically the previous rate of 13.7.

There is thus secured not only a natural increase rate for the nation as a whole but separate rates of natural increase for the rural and the urban populations of the nation. With these rates established it is possible to proceed to estimate the factors of urban increase and the force rural migration plays in accounting for it.

Since we have the rate of natural increase for urban communities it is a simple matter to apply it to the population of 1900 to determine what that factor contributed to the increase of city populations. The urban population at that date was 30,826,198, and its natural increase was 2,715,000. But since the urban districts must be assumed to have lost their proportionate share of emigration from the nation, that number is decreased by 206,000, leaving 2,509,000 as the contribution the cities make to their own growth. This is found to be 21.6 per cent. of the actual urban increase.

Incorporation.— A process of discovering the force of incorporation in the growth of cities is necessary, for city populations are enlarged by incorporating new areas about incorporated cities and by the growth of villages and their incorporation as cities. For the nation as a whole we have but to find the difference in population at the dates 1900 and 1910 of the territory that was urban in 1900. (13th Census, Vol. I, p. 60.) This gain, together with its natural increase, amounts to 924,000 inhabitants and is 7.6 per cent. of the urban increase of the nation.

Relative to the 6 and 13 states which were referred to above the case is more involved. It is necessary to obtain the urban gain for each of the states, their urban territorial gain, and the difference. We learn as a consequence that the force of incorporation, without estimating the natural increase as a source of urban growth varies among the 13 states from 0.4 to 12.2 per cent. The average for the 6

states is 4.4 and for the 13 it is 4.7 per cent. These per cents. represent their approximate contributive force to the growth of cities, respectively, in each case.

Rural Migration.— One of the conspicuous phenomena which has shown itself during the course of our history is migration of inhabitants from one portion of the nation to another. There has been a kaleidoscopic shifting, generally westward, of great numbers of people. No inconsiderable portion of this movement has consisted of agriculturalists. Most migrants have gone to build up the new regions which have lain to the west, relatively few have moved east, a considerable number have gone to the cities. To what degree has migration from rural districts contributed to the growth of the cities?

Seeking to learn the contributive power of the rural districts we find the rural population in 1900 was 45,197,390. Had the natural increase alone been operative the above number should have been enlarged by 7,660,000 inhabitants in 1910. But the actual rural increase fell 3,509,000 short of this, being but 4,151,493. Not all of the difference between these two amounts went to live in the cities. The census increase of 4,151,000 must be increased by the amount of the emigration, together with its natural increase, of 381,000, and by incorporation that was taken out of rural regions which together with its increase during the decade amounted to 1,305,000. On the other hand, besides the natural increase of the rural population the country received an immigration from abroad, which together with its increase during the decade amounted to 1,322,600. The difference represents the amount of population the country lost to the cities. This difference is about 3,527,000, or 29.8 per cent. of the total urban increase.

Immigration.— That the cities absorb the preponderating share of immigrants is demonstrated by the percentages of distribution of the foreign born. That element of the popu-

lation constitutes 14.5 per cent. of our inhabitants and is distributed as follows: the rural regions, including incorporated places of less than 2,500 persons, claim but 27.8 per cent., while the cities contain 72.2 per cent. Cities of 10,000 and over hold 63.4 per cent. of the foreign born.[10]

Since 1907 the national bureau of immigration has defined "immigrant aliens" as those immigrants who declare their intention of settling in the United States for one year or more. Since then it has tabulated annually the number of immigrant aliens destined for and also departing from each of all the states. For the year ending June 30, 1909, Illinois, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania received 529,688 such aliens and lost 152,178, thus retaining 71.3 per cent. Those states contained in that year 71.7 per cent., net, of all immigrant aliens in the nation. (Report Com. Gen. of Immigration, 1909, Tables IX and IXa.) During the period 1908–1913, the net immigration to nine states, the six just mentioned together with California, Connecticut, and Michigan, amounted to 70 per cent. of the total immigration of that period. (F. S. Chapin, Amer. Stat. Assn., Sept., 1914, p. 225.)

Another indication that immigrant aliens are a large factor in city growth and population is seen in the statistics of foreign born and children of foreign born living in cities. For the decade ending 1910 foreign born persons and children of foreign and mixed parentage constituted 54.4 per cent. of the population living in cities having 100,000 or more inhabitants in the six states, Illinois, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania. In the cities of those states with populations of 25,000 to 100,000, the foreign born and natives born of foreign and mixed parentage formed 58.7 per cent. of the inhabitants of those places. (Abstract 13th Census, p. 92.) It is unlikely that still smaller cities have a much lower percentage of such persons.

[10] Thirteenth Census, Population, Vol. I, p. 172.

So far we have demonstrated that immigrant aliens settle in a relatively few states and that those states have the highest percentage of urban population. Now we must consider the factor of urban growth in its relation to immigration.

The increase of the urban population in the six states, Illinois, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania during the 10 years, 1900–1909, was 5,419,806. The urban increase in 13 states, the six mentioned together with California, Connecticut, Michigan, Minnesota, Texas, Washington, and Wisconsin was 7,831,099. The total urban gain for the United States in the same period was 11,826,000. (Abstract 13th Census, Table 15.) The six states sustained 49.2 per cent. and the 13 states sustained 71.1 per cent. of the total urban growth.

The net immigration to the whole nation, not computing loss by death, during the same decade was 5,741,671, to the 6 states, 4,134,003, and to the 13 states, 5,167,504. That to the 6 states is equivalent to 72 per cent. and that to the 13 states, to 90 per cent. of the national immigration.

By a comparison of urban growth and immigration it is seen that the immigration to the 6 states equals 76.2 per cent., and that to the 13 states amounts to 65.9 per cent. of their urban increase. That to the whole nation is 48.6 per cent. of its urban increment. There is thus reason for thinking that immigration in the United States outside of the above states has less to do with populating cities than it does within those states.

The facts just presented create a strong presumption that the immigrants largely locate in cities. This presumption becomes all the stronger when we consider the industrial situation. Relative to that of the six states considered above is there any reason to think that any large portion of their immigrant aliens go into agriculture? All of those states have had their available agricultural land occupied for a long time, and while land changes owners to a limited extent the

scope of the exchange is too limited to absorb many of the immigrants. Nor is there evidence that immigrants to any considerable extent are purchasers of land in those states. And what is true of the 6 states is only a little less true of the others of the 13 states.

Therefore, since the states alluded to manifest nearly one-half of the urban increase of the nation, since they absorb almost as great a proportion of the immigration, since the amount of their immigration equals so much of their urban gain, and since the logic of their industrial conditions is against the absorption of their immigrants by agriculture, the conclusion must be that their immigrants largely settle in their cities and cause their growth.

How nearly is immigration competent to account for that part of the urban increase of the nation which is not covered by natural increase, incorporation, and migration from rural regions? We have found that the three factors have contributed to urban growth as follows: — Natural increase, 2,509,000, or 21.6 per cent.; incorporation, 924,000, or 7.6 per cent.; rural migration, 3,527,000, or 29.8 per cent. When totaled these contributions leave a deficiency of 4,866,000, or 41 per cent., the number of inhabitants necessary to make up the total of urban increase. It was found that the net immigration for the decade was approximately 5,250,000 (Abstract 13th Census, pp. 191 and 215), which is considerable more than the number needed. The difference, as was stated, settled in rural districts.

It is apparent that the method which we have used is scientific and that our results are approximately correct. Neither census nor immigration statistics are absolutely correct, there are many minor modifying factors to be taken into account, so that all we could hope to attain is a close approximation.

It is necessary to be reminded that the loss of population which rural districts sustain is measured by the actual migra-

tion from the open country. It is to be understood also that the above computations are based on the distinction the census makes between city and country, namely, that cities are places which have 2,500 or more inhabitants, all other communities being counted country. Thus we find that in 1910 there were 11,784 incorporated places having less than 2,500 persons each with a total population of 8,118,000. In some respects these communities are rural but they are far from being open country districts. Much of the migration to cities is from these small villages and towns and they also in turn receive a large number of immigrants. Consequently the open country has lost a smaller number of persons than our "rural migration" includes.

It cannot be doubted that, up to the present time, the preponderating portion of those who have caused "rural depopulation" by leaving rural regions have not gone to cities but to other sections of rural United States. The study of interstate migration which took place in the decade ending 1900 amply demonstrates this for that decade. We must let New York represent the industrial and Iowa represent the agricultural type of states. But the author has proven it for other states. (Quarterly Journal, University of North Dakota, Oct. 1910, pp. 65–7.)

It is to be observed that the South Central and South Atlantic states received but a small proportion of New York born; that the industrial states of the North Atlantic division absorbed the most of that division's share, the cities evidently taking them; that the North Central states which have been building up agriculturally during the nineteenth century and industrially during the last few decades took the largest exodus of any one division, the fair inference being that the migrants chiefly went onto farms, and that in the Western division agriculture and mining took up the larger portion of New York born.

Regarding the 7.4 per cent. and 26.1 per cent. of the state's

population who were immigrants from other states and foreign nations the rural regions probably took the larger portions of the former until relatively recently while the cities have absorbed the immigrants. The constituency of New York City and Buffalo warrant the latter inference. As to the former city, 55 per cent. of the population were born in the state, 8 per cent. in other states, while 37 per cent. were foreign born. As to Buffalo, the percentages in the same order are 63.2, 7.2, and 29.6.

Taking Iowa as a type of the state largely agricultural but with considerable industrial development, the following are the data as to distribution of the interstate migration: The divisions which absorbed the Iowa born to the extent of 25,000 or more are as follows: North Central, outside of Iowa, 387,052, of which Illinois received 48,096; Minnesota, 42,096; Missouri, 52,575; South Dakota, 31,047; Nebraska, 85,807; Kansas, 88,153; South Central, 37,285, and Western, 115,092. Evidently the migrants went to swell the agricultural population of the nation to the greatest extent.

With regard to the native born and the foreign born who settled in the state, a total of 913,476 persons, it is evident that they went into agriculture mostly, since the urban population of Iowa in 1900 was 16.8 per cent., while these elements make 40.9 per cent. of the state's population. Selecting Des Moines as a typical Iowa city, the percentages of Iowa born, native born from outside Iowa, and foreign born living in it are respectively 52.6, 34.6, and 12.8.

III. SIGNIFICANCE AND CAUSES OF MIGRATION TO CITIES

Isolation and Loss of Leadership.— Notwithstanding the fact that the flow of country population to the cities is less than is generally supposed, there may be some important considerations for rural communities involved in the movement. However much else may be implicated, the following points deserve attention:

First, the actual loss of population in itself may not be an affliction to the country. It is rather the results which flow out of this loss which might prove baneful.

Second, we may conceive that the country will receive an injury in so far as the supply of subsistence necessary to its existence is cut down. Reflection shows that this injury is more apt to be felt by the people of urban communities than by those of the country, because to lessen rural population is to enlarge the farms, widen the scope of agriculture for those who remain farmers, and to heighten prices of farm produce in so far as the supply of subsistence needed for the nation at large is reduced or menaced. But if the labour supply which is necessary for agricultural production goes to the city, leaving farms untilled or crops not harvested, the rural region so affected would receive a direct injury.

As a matter of fact, the supply of farm produce has not been put in jeopardy in America thus far though there is a decrease in the exportation of the products of the farm, and if it had been jeopardised the farmers who sell would be benefited rather than injured. Moreover, if the prices of foods have risen, as they have, it is not certain that any considerable part of the rise is due to the lessening relative rural population. In so far as rural population touches prices it is by way of the organisation of agricultural producers to regulate market prices for their own benefit. As to the supply of farm labour, it is a fact that many regions of our nation are afflicted with shortages of labourers periodically. But this periodical shortage, while certainly an inconvenience and often a source of loss to the agriculturists involved, must be regarded as but natural, since the demand for labour is on a periodic basis and no provision is made for constant supply of employment or for appropriate social conditions.

Third, we may briefly notice the injury to the country arising from the increased isolation of the farm families by reason of loss of rural population. In the older communities

of the eastern and middle states and also in the newer communities of the more western states, farm consolidation is proceeding, leaving abandoned homesteads as melancholy reminders of the former occupants. In the fertile valley of the Red River of the North many such deserted homesteads may be seen. The country districts are losing, though the counties themselves are gaining population. The farmers have sold out to their neighbours and have gone farther west or north to take up land just as the Iowa farmers and the Minnesota farmers are selling to their neighbours and have gone west to buy land.

Professor Bailey regards the lament of the "abandoned farm" as the product of sentiment rather than of reason. He believes farm abandonment is a necessary part of the agricultural shift which is taking place and that it has some redeeming aspects.[11] However, he overlooks the social isolation which may ensue by reason of the elimination of every other country family, probably not great in thickly settled New York state, but considerable in some sections where the farms are already large. A family to the square mile is not conducive to intercourse and sociability of the personal sort, save as automobiles and other means of rapid transit exist to encourage it.

Fourth, the most serious effect of the shift of population from country to city is involved in the loss of leadership sustained by rural communities. This will receive special consideration in the chapter on education.

Ultimate Causes.— Relative to the drift of population to cities, we must distinguish between the ultimate and the psychological influences. In our inspection of the facts of city growth we found the rate and tendency had been uniformly manifest from the beginning till now. This forces the inference that fundamental and constant forces of such a nature are at work that we must expect their continuous op-

[11] "The State and the Farmer," Chap. 1.

eration. When we look over the whole field of nations, the most advanced in civilisation, we discover that the city trend is universal. Indeed it is obvious that rather than being exceptionally victimised by urban increase at the expense of the country districts the United States has fared well.[12] The forces at work to produce the cityward movement are peculiar to the age in which we live and are essential and intrinsic to it. The United States has escaped their full effect because it has had a vast, free, seductive, and easily worked agricultural domain which has absorbed its own and other nations' fluid populations.

We have had other city ages in the history of mankind, but none on such a universal scale, nor any in which in any state the cities were so numerous, so large, or so essentially a vital part of the social mechanism as is now the case. The reason was that the scientific knowledge and technical appliances which now create and propel human progress and currents were absent. Our city age is in birth and growth coexistent with the industrial age. Back of this as its precondition lies the growing body of exact knowledge in physics, chemistry and other sciences which has been absolutely necessary to the mechanical and economic evolution and which created it. Our modern populations are caught in the whirl of a civilisation which rests on scientific and technological principles. These principles logically and inevitably work out along industrial and commercial lines, multiplying and refining the goods of the former, and demanding the latter on a huge complex scale for their exchange. Thus the number of city dwellers demanded to carry on these enlarged and rapidly expanding lines of human endeavour constantly increases and since the expansion of industry is somewhat in geometrical ratio to the growth of population at large the city population forges ahead of the rural.

The agricultural regions also are affected directly by the

[12] Strong's "Challenge of the City," 20.

scientific and technical principles and appliances, but here the results on population are entirely opposite to those in the case of cities. For the farmers are producing raw material and as the productive power of labour is increased on the farm more food is produced. People can eat only about so much. The increase in the farmer's productive power enables more people to live in cities, to take part in diversifying the forms of raw material, enhancing their prices, and in exchange and other work. It may even enable the farms to reduce their population, though this is not likely to be the actual case.[13]

Being a constituent and intrinsic part of the social process we may not expect the tendency to cease. Rather we must expect the continued growth of science in its principles and applications, of inventions of machines, the multiplication of the forms of goods to be manufactured, the increased specialisation in vocations, the development of scientific and intensive agriculture.[14]

Psychological Causes.— The psychic and immediate forces moving inhabitants to cities are social, cultural, recreational, and vocational. Country life is isolated. Social intercourse is restricted. The moving throng and kaleidoscopic life of cities fascinates and allures. Cities are centres of information, of thought, of art, of music. The achievements of the ages are condensed and packed in their structures, machines, museums, libraries, institutes, and marts; and the frequent and immediately accessible newspapers effervesce with news of the current cosmos. The productions of the masters in painting, sculpture, and architecture may be seen, and the present masters of voice, interpretation, and instrument are to be seen and heard. Modes of recreation and amusement abound to match the tastes of every class of devotees, no small inducement to those used to isolation and a monotonous round

[13] See Chap. 12 for effects of farm machinery on production.

[14] Strong, "Challenge of the City," 21–35.

of labour. Occupations and pursuits of multitudinous forms to suit the whims, the tastes, and the inclinations of every type of individuality exert their glamour and provide a satisfaction often actually more seeming than real, yet nevertheless seductive in the extreme. All of these influences combined constitute a powerful attraction and suffice to sweep the retired farmer, the ambitious youth seeking to get established, the occasional worker, and the adventurer, into the whirl of urban life.

Remedial Efforts.— If we have succeeded in locating the more important influences which impel men cityward, and if it is worth while to seek to deter the stream of life flowing out of rural places, in so far as our analysis is correct we have a clue to the remedial agencies to be adopted.

First, since the great population movement takes place in response to the profound forces which are essential and intrinsic to this age, we might as well expect to dam the Mississippi River to keep back the flow from the gulf as to avert the bulk of population from the cities. Farm colonies and "back-to-the-farm" movements have very small possibilities as solvents. Possibly some day, as in Belgium, now, cheap transportation and other inducements may enable urban workers to live far out in country regions. But they will not be farmers. Industrial and commercial aggregations are inevitable. We must expect their increase. Our social efforts must be turned to things which may be accomplished.

Second, the second set of causes inducing persons cityward, namely, the social, cultural, vocational, and recreational, in so far as they are not dependent on the first, may be checked by regulation. This may be accomplished by setting up counter-attractions in the country. Country life can be and ought to be improved. Country homes should have the comforts and conveniences of city homes. Farm life can be made more cultural and social. Amusements and recreation can be made

a part of child life as well as of adult. Improvements and mechanical devices can lessen the hardships and drudgery of outside and inside work.

Third, rural school life can be reorganised and filled with new content, aims, and ideals so that the youth in training shall come to look upon agriculture as an honoured, useful, and desirable line of life. To make the rural school over is to make over the next generation of country people and to furnish them with a well-equipped leadership of their own.

REFERENCES

Bailey, L. H. "The State and the Farmer," Chap. 1.
Coman, Catherine. "Industrial Hist. of the U. S.," pp. 243–6.
Strong, Josiah. "Challenge of the City," pp. 20–35.
Bogart, E. L. "Economic Hist. of U. S.," Chap. 18.
Ellwood, C. A. "Sociology and Social Problems," Chap. 12.
Hartt, R. L. "The New England Small Town," *World's Work*, June, 1905.
Gillette, J. M. "City Trend of Population and Leadership," *Quart. Journ. University N. Dak.*, October, 1910 and March, 1911.
Hall. "Immigration," pp. 343–5.
Eleventh Census, U. S., "Population," Pt. I, p. cxxxvi.
Twelfth Census, U. S., "Population," pp. lxxxii, civ, and clxxiv; tables 29, 36, 62, 68, and 78; and plate ix.
Census Bulletin, No. 4, 1903, table xxiii.
U. S. Statistical Abstract, 1908, p. 75.
"Report of the Commissioner General of Immigration," 1909, pp. 19–20; and 1912, p. 129.
Abstract of Thirteenth Census.
"Cyclopedia of Amer. Agriculture," Vol. IV.
Fisher, Irving. "Report on National Vitality."
Jenks and Lauck. "The Immigration Problem."
Fairchild. "Immigration."
United States Report on Agricultural Cooperation and Rural Credit in Europe.
B. H. Hibbard. "The Decline of Rural Population," American Stat. Association, March, 1912.
A. E. Cance. "The Decline of the Rural Population in New England," same, March, 1912.
Abstract of Thirteenth Census.
Volume I, "Population," Thirteenth Census.
F. S. Chaopin, "Immigration as a Source of Urban Increase," American Stat. Association, September, 1914, pp. 223–7.

CHAPTER VI

THE SOCIAL NATURE OF THE RURAL PROBLEM

There is a consensus of opinion among writers on country life that there is a rural problem. How far the farmers of the nation participate in this belief is undemonstrable. Unless they believe that there is something wrong with their estate it will be of no immediate benefit to the country for writers to agree. In this case a beneficial change could be produced only by a long and elementary process of education.

That the farmers are of the opinion that there is something wrong with the country there are indications. There is a growing interest on their part in the discussion of rural matters. This pertains to more than the consideration of improvement of soil, crops and machinery. The schools and neighbourhood conditions are discussed with interest. This is noted not only in the frequency with which educational subjects appear on the programmes of farmer's meetings but in the marked attention and interest farmers manifest towards the papers and discussions on social subjects.

Sense in Which There is a Problem.— It would be an error to think that the problem exists because of rural deterioration. There has been no such deterioration in the United States in any general sense. In fact there has been conspicuous progress made by our agriculturists. We have but to compare the present conditions of life on the farm with that of pre-Revolutionary times to see this. Indeed a comparison with more recent times will prove sufficient. Our contemporaries who were born in the earlier third of the nineteenth century well remember the hardships, privations, and primitive methods of farming and farm life which prevailed in their youth.

It is one of the glories of the average well settled community that it is better fed, housed, and clothed, and does its work more easily and rapidly than was possible in the earlier period.

It is true there has been retrogression in certain communities; also that many communities have failed to make the advance sustained by the agricultural regions generally. Those communities constitute special pathological studies. They are to be located and mapped out in all their conditions just as the sore spots in the cities are now undergoing study with a view to improvement.

Certain communities have shown a very recent tendency to deterioration in social matters. This is particularly true of certain regions of fertility and prosperity where the farmers have retired into the neighbouring villages or cities, leaving the conduct of the farms and the leadership of the neighbourhood in the hands of renters, who may or may not be inferior to the owners in ability and ambition but who, it could hardly be expected, would show the same interest in the up-keep and the upbuilding of the community as the permanent owners.

The rural problem is in reality a product of the intellectual faculties. There was no rural problem recognised a few years ago. Conditions in the country have not grown worse since then. Country life was regarded as satisfactory and as well suited to the needs of the farming classes. Then men began to think about rural conditions. Rural education was subjected to a fierce criticism. Persons who had pursued courses in rural sociology and the press of the country took up the discussion, agricultural schools responded, farmers' institutes were infected, and the President of the United States took the important step of appointing the Country Life Commission. This move of Mr. Roosevelt itself had an enormous effect. The whole country from Maine to California and from North Dakota to Texas was filled with opinions about rural decline. Eventually progressive farming

populations took up the discussion of country life betterment. The origin of the problem lay in the discovery that conditions in the country might be improved, that they are not as good as the people living there deserve, that the majority of the owners of farms could well afford better things in the home and in education than they support, and that there is no inherent reason why the farming class may not and should not live as well as people of equal financial ability who dwell in the cities.

Dependence of Farm Life Upon Other Activities.— In considering the nature of the problem of the country we face the fact that the farmer cannot escape being wrapped up with the destiny of the rest of the nation and the world. The discovery of this interdependence and relatedness of farming life to all other kinds of life and to farming life all over the world is a part of the location of the problem. It is in the nature of a revelation to the nation and to the farming class that there is something to do. To put clearly before the farmers that they are on a competitive basis with others of their class in this country and outside, and that they also compete with other classes in given particulars is to state conditions which they must meet.

It is no reflection upon the farmer to state that in his outlook he has been an intense individualist. His philosophy of life has been developed from his contact with nature and from his apparent aloofness from the social mechanism. His crops and his stock, his income and his prosperity have seemed to come by the application of his own individual effort to the conditions which the physical environment afforded. He has been told by party politicians that it was his duty to vote for the traditional party policy, the realisation of the opposing policy meaning disaster. Occasionally he has asked that the government should assist him by means of agricultural schools, or by putting a curb on railways and other corporations. But these appeals, or approaches toward

It would be interesting to know just how far this somewhat make-believe rating is applied by farmers to themselves. Experience and observation leads us to believe that it is partly accepted and that it is also resented, indicating a certain class consciousness. City men who were farmer boys vividly remember with what dread they entered town, how the city people were looked upon as superior to country people, how they were swelled with importance when they received their first notice from city boys, how there was a state of hostility between country and city boys, a hostility based on a consciousness of certain distinct differences in the mode of life. While rivalry and neighbourhood pride existed in the relationships of country communities to each other it was of a different sort than that between town and country.

It has been a matter of observation in a large number of states that social recognition is sought of urbanites by rural people and that it is hardly ever the reverse. In a well known neighbourhood this was decidedly the case. Country people felt a pride in being given recognition by residents of the town. Country women drew heavily on the home treasury to cater to guests from the county seat. The sententious remark was made of those who associated with urbanites, "Oh, she is above us now since she is associating with town people!"

Dearth of Leadership and Other Problems.— The leadership of the rural regions is undeveloped or is largely lacking as compared with what would be expected of such a populous and wealthy portion of the nation. This backwardness in leadership is noticeable in several directions. In the national governmental affairs it would be difficult to mention a member of the farming fraternity in any branch of the government who stands out as a real leader. But certainly the farming class has something at stake in the conduct of the national government. Its interests in agricultural education, in the price of its products, in the adjustment of the tariff

on farm products, in being consumer of imported goods on which rates are levied, in the adjustment of freight rates placed on its output and on the goods it purchases are of the greatest importance. Yet it has rested complacently on the theory that the interests of one class may and will be properly cared for by the representatives of another class. The Labour class of the world gave itself up to the same fallacious theory until recently. It trusted its affairs to the mercies of the classes which made use of it. In European nations and in Great Britain this notion has been superseded by the belief that its own representatives will best serve it in legislative and general governmental matters. The numerous labour members who sit in national legislatures are a standing testimonial to the changed attitude.

In state matters the farmers have a large membership in the legislatures, though their influence is not in proportion to the number of seats they occupy. Too frequently they simply register votes under the leadership of members of other classes. In executive and administrative matters they possess little power.

One of the great problems confronting the country, therefore, is to create the leadership which the economic importance and the populousness of the farmers warrant, to develop the organisation and coöperative ability which the age necessitates, and to learn to respect and to esteem itself as a social class equal to other classes. For there is no reason to think that in natural ability, in solidity of understanding, and in common sense the farmers are inferior to members of other occupations.

Connected with the economic side of farm life is the matter of conducting the farm as a business undertaking. This is seldom done. Farmers are accustomed to let things take care of themselves, to undertake the year's work, the putting in of crops, the breeding of stock, the support of a dairy

herd on general principles. Little or no record is kept of the items of expense. Memory is trusted to connect the present undertaking with past experience. The average agricultural undertaking is very similar to sailing the ocean without any knowledge of the charts, depending entirely upon the compass hour by hour and day by day to get the ship across safely.

Since the farmers are to-day competing with all parts of the world in the production of their crops, stock, and dairy and poultry products they are amenable to the laws of supply and demand and the setting of prices in the markets of the world. They are also competing with other lines of business to get the largest returns out of a given amount of capital. To consider it as a business, to know its ins and outs, to have a complete record of it so as to ascertain its value as a business proposition constitutes a necessity of farming. How to realise it also constitutes a problem.

The sociability phases of rural life are of even more importance than the material phases. They are related to the latter somewhat as end to means. Without social intercourse the life of the average person would be considered empty notwithstanding the possible largeness of the farm, the great yield of produce, the beauty and fatness of the stock, and the extensiveness of the bank account. If the country is deficient in sociability matters we shall have to regard it as an evil.

There are some indications that country life is more nearly stagnant and impoverished in social intercourse than in other directions. Stagnation means that, relatively speaking, rural life does not keep pace with corresponding grades of life in the city. Social poverty involves the thought that the country is really backward in view of the demands and ideals of modern life. Deficiencies in intellectual stimulus and outlook, amusement and recreation, associational and institutional agencies, and in education deserve extended considera-

tion. This will be accorded them in succeeding connections.

The Proper Point of View.— The drift to the cities has been thought to be the rural problem. The press frequently reports meetings which have been called to combat the urban tendency or to promote the "back to the farm movement." We have noticed this so-called evil in the previous chapter. It was there ascertained that the cities of the United States, in keeping with a world-wide tendency, are absorbing larger and larger proportions of the population of the nation. We investigated the source of the growth of cities and discovered that only about 25 to 30 per cent. of their increase is derived from country districts during the decade 1900–1910 while about 41 per cent. was due to foreign immigration. The movement of population from one farming section to another, especially to regions in process of settlement, has largely accounted for the actual and seeming loss of country inhabitants in general.

It is proper to recognise that there is a considerable movement of persons away from farm life. But the subordination of the country to the city in matters of population must be regarded as largely inevitable. This takes it outside the range of being a problem that is pressing on us for consideration.

The point of view to be supported relative to farm life is not that which undertakes to improve conditions in order to keep people from moving to the cities. It is rather that which seeks to better the rural situation for the sake of those who are to remain in it, to secure for them what of right should be theirs. Rural people are as good as urban people. What civilisation has matured should be theirs to use because they are its heirs and participants along with city dwellers. We must make up our minds that many persons will leave the country for the city and that it is well that they go. The great undertaking is to give country dwellers an insight into the possibilities of rural life and an understanding of con-

ditions which will enable them to secure for themselves all the blessings and satisfactions which civilisation embraces. And this should be carried out by right of their humanity, not to keep them on the farm.

REFERENCES

Bailey, L. H. "The State and the Farmer," Part II.
Bailey, L. H. "The Training of Farmers," p. 6ff.
Butterfield, Kenyon L. "Chapters in Rural Progress," Chap. 2.
Bookwalter, John W. "Rural Versus Urban."
Anderson, Wilbert L. "The Country Town."
Plunkett, Sir Horace. "The Rural Life Problem of the United States."
"Problems of Country Life," *World's Work*, 17:11195.
"A Commonwealth Ruled by Farmers," Frederick C. Howe, *Outlook*, 94:441–50.
U. S. Census, 1910, Vol. V, "Agriculture."

CHAPTER VII

ADVANTAGES AND DISADVANTAGES OF FARM LIFE

Were our task merely to build a science of rural sociology a discussion of the advantages of farm life might be out of place. A cold-blooded science desires to know the facts, not for utilitarian purposes directly, but in order that they may be given their proper classification and that legitimate scientific conclusions may be drawn from them. But in its applied phase rural sociology has a right to consider whether or not rural life is advantageous. It must proceed upon a comparative basis and the only range of comparison is country and city.

In nearly every succeeding chapter we shall find it necessary to refer to city conditions to discover whether the country is realising all it might realise in some given direction. It may be discovered that some of the advantages of farm life are arbitrary and not intrinsic to it. In that case they are open to attack and may be subject to elimination or reduction.

There are two available methods of discovering the advantages and disadvantages of farm life. One is to find what people think they are; the other is to decide the issue by deliberately weighing the facts in the case. Neither method excludes the other. Both methods are valuable and supplement each other.

Student Opinions of the Country.— Statements of opinions relative to the desirability of farm life have been gathered by means of sending out questions to students in educational institutions. Of the two questionnaires available one

was sent to Cornell University, New York, students; the other, to students of the University of North Dakota. Only the salient points gained from the reports can receive attention.

The disadvantages which received most attention by North Dakota University students in reply to the question, "Why did you leave the farm?" were those due to meagre financial rewards, presence of hard labour, and dearth of social and intellectual opportunities. Positively stated, educational and professional aims and ambitions exercised the greater propelling influence away from farm life. The majority of the students who replied were from the country but practically none planned to return.

One farmer boy writes that farming is a position of the greatest independence. If conditions were rectified it would be an ideal calling. It offers a place where habits of industry and perseverance are cultivated. A student from town who had lived two years in the country wrote: "I hope that the two years I spent on the farm may never be repeated."

The Cornell questionnaire includes replies from two groups of students; 68 were city bred but expected to become farmers; 193 were from the farm and were studying in the Agricultural College to secure a training which would improve their farming operations. The following points in favour of farming received emphasis: Desire to be out of doors, love of nature and of farm life; belief that it provides an independent, remunerative and agreeable occupation, a healthful life, wholesome family conditions, and opportunities to cultivate the mental and spiritual nature.

These questionnaires furnish some interesting facts. First, although North Dakota is an agricultural state predominantly the students of its university commonly expressed a desire to leave the farm or to avoid it. This is a decided

contrast to the New York replies. In Cornell University both city and country bred students show a strong bent toward agricultural life. Second, the love of nature and out-of-door life is conspicuous in the case of the New York students. This is particularly true of the group of students who came from the farm. Perhaps instruction in the institution had much to do with this. Third, no less significant are the statements of Cornell students of both city and rural groups as to what farming provides. Professor Bailey, who made the study, remarks that the replies of the students from farms upset the widespread notion that the agricultural college educates away from the farm. His remark is true of Cornell and a few other similar institutions, but not of all agricultural colleges, as will be seen in the chapter on rural education.

I. ADVANTAGES OF FARM LIFE

A deliberative consideration of the advantages to be derived from a life on the farm marks the following important ones:

Out-of-Door Life and Health.— We are acknowledging in many ways the advantages to be derived from an out-of-door life. We have open-air schools, open-air cure for tuberculosis, outings and tramps for nervous break-downs, insomnia, etc. More and more city populations and indoor workers try to get possession of a period of time for recreation and exercise in the country. The construction of extensive parks in cities is a recognition of open-air spaces for exercise and oxygenation. What health experts and city dwellers seek to impress and realise to a degree the farmers, at least the men, and to a considerable extent the women, realise throughout all or the larger portion of the year. If the farming class is not more robust and healthier than city dwellers it is

not because of the neglect of the normal use of out-of-door life.

The cities tear down the nervous organisation of human beings at a fearful rate. The battering of the nervous system which takes place through the ears in metropolitan places is prodigious and incessant. To one who has lived away from them for a number of years and returns the clatter and clash, the rush and pandemonium of sound, is almost awful. It represents a Niagara in comparison with the peace and quiet of a mountain vale. Says Fisher:[1] "Observing practitioners comment on the increasing nervous tension in modern life. The rush of the railway train, the telephone, the elevator, are at once an outgrowth and an excitant of this increasing tension. They are life's pacemakers and the pace is ever quickened. The health officer of New York City attributes to this severer strain the increase of heart and nervous diseases. It would be interesting to know the relative prevalence of adult diseases under conditions of reposeful and exciting surroundings and occupations, but I know of no investigations on this phase of the subject." In other connections he calls attention to the fact that the expectancy of longevity in infancy has increased while that for persons of 60 has decreased, save for the last few years in Great Britain, where it tends to hold its own. Common observation holds that city conditions tend to tear down and wear out the stock in a few generations, and that country life is conducive to repose and longevity. It is stated that dwellers of London fail to reproduce their stock after the third generation. The general advantage to health to be derived from living in the open country is made obvious by the following statistical considerations:

1. *The death-rate of rural regions is lower than that of cities.* This is established by the census statistics concerning mortality in the registration areas of the nation. Up to

[1] "Report on National Vitality," p. 98.

1910 cities of at least 8,000 persons were counted as urban, since 1910 places of at least 10,000 have been so regarded. Upon this basis the death-rate per 1,000 in urban districts for the years 1909 to 1912 inclusive was 15.4, 15.9, 15.1, and 14.7; for rural regions it was 13.0, 13.4, 12.7, and 12.4. The urban mortality average for the four years was 15.2+; the rural average, 12.6+, a difference in favor of the latter of about 3.6. On the other hand, within that brief period the cities show a decrease of 1.4 in the death-rate, while the country rate declined but 0.6.[1a] No doubt a part of urban improvement in this respect is due to increased attention to matters of sanitation, especially to the food supply of infants. But unquestionably some of it is to be attributed to the flow of vigorous young men and women from the rural region of both America and Europe to the cities.

2. *The death-rate among children for certain diseases is lower in the country than in the city.* Since the late census and mortality reports do not give available data on these points, those of 1900 are used. It is seen that the death-rate among urban children under one year of age is from two to over three times that among rural children of the same age, and that for children under five years of age the urban death-rate is almost equally disadvantageous. This is indicated in Table 6.

TABLE 6[2]

DEATH RATE OF CHILDREN IN REGISTRATION STATES (1900)

Diseases	Cities		Rural Parts	
	Under 1	Under 5	Under 1	Under 5
Measles	206.3	151.2	119.3	63.4
Scarlet Fever	35.1	80.6	20.9	40.0
Diphtheria and Croup	180.9	343.8	59.0	124.6
Diarrhœal diseases	4,595.9	1,218.0	2,576.6	713.7
Total death rate of white children	18,410.0	5,970.0	11,740.0	3,440.0

1a Mortality Statistics, U. S. Census, 1912.

2 *Census*, 1900, "Vital Statistics," Pt. I, pp. lxxxiii ff.

Professor Mangold writes as follows: "Danger from contagion is much more common in the city than in country districts. Even the most painstaking measures of quarantine and isolation will not obviate the differences. The ebb and flow of city population tends to perpetuate disease and to carry it from place to place. From these dangers the rural districts are almost immune. The cities likewise offer the lurking germs a better opportunity to hide themselves, and the squalor and poverty of the 'other half' renders them easy victims of disease. Federal statistics indicate that such children's diseases as diphtheria, measles, scarlet fever, and the diarrhœal diseases are much more frequent in the cities than elsewhere. It has been shown that in Massachusetts measles and scarlet fever are three times as frequent in the city as in country districts, and that in the United States smallpox and diphtheria are twice as prevalent in urban communities."

The city is handicapped by being dependent upon an imported food supply which is subject to deterioration while en route to the city. This is especially true of milk. It is a breeder of diarrhœal diseases, and sometimes certain contagious diseases. City water has commonly been inferior to that in the country.

In addition to these causes may be mentioned "deaths from premature births, congenital debility, and similar weaknesses, which in the cities exceed the rural rate by 60 per cent.; while deaths from convulsions are 50 per cent. higher." The figures in the above table show that the urban mortality is over 50 per cent. higher for age periods than that of the country. "Our cities destroy three children for every two who die in the country!" [3]

3. *The death-rate for the various ages in the registration areas of the United States is higher in urban than in rural districts.* This is shown in the accompanying table (Table 7).

[3] *Ibid.*, p. 38.

TABLE 7[4]

DEATH RATE BY AGE GROUPS

Corrected death rates, per 1,000 population, age groups, U. S., 1900.

Per 1000 Population

Death rate per 1000 population — Both sexes

	All Ages	Under 5	5–9	10–14	15.24	25–34	35.44	45–64	65 and over
Urban	20.14	60.66	5.43	3.13	6.11	9.19	12.37	26.69	116.63
Rural	13.79	37.12	3.79	2.84	5.51	6.84	7.72	16.16	92.40

This estimate makes places of 8,000 population the dividing line between city and country. It therefore includes in "rural" considerable urban population. Since, under this condition, the rural section makes a much better showing than does the urban, it is possible that, could data for exclusively country populations be obtained, the results would be still more favourable. Still another fact is favourable to the rural districts in this respect. The city receives large additions to its population from the country. These new recruits immigrate to urban districts in the prime of life. Since something like 40 per cent. of the growth of cities is accounted for from this source, it is apparent that as a consequence, the urban mortality is lowered in the early adult and later youthful periods of life. The age periods showing exceptionally low rates in the country in comparison with those of the city are those under 5, from 5 to 9, from 35 to 44, and from 45 to 64.

In a mortality table which shows mortality rates for these age periods by sex the rates quite generally conform to those in the table given above. But one exception to the generally uniform lower rate for the country occurs. That is in the age periods 15 to 19, and 20 to 24, for females, in which the rate in the country is 0.19 higher than that in the city for the former period, and but 0.01 lower for the latter period.[5]

[4] "Mortality Statistics," U. S. Census Bureau 1911, p. 18.

[5] *Ibid.*, p. 19.

On the other hand the urban rate exceeds the rural rate in all the other 28 causes. The large excess occurs in the enumerated causes approximately, as follows: Scarlet fever, 50 per cent.; erysipelas, 100 per cent.; tuberculosis meningitis, 100 per cent.; cancer, 50 per cent.; diarrhœa and enteritis (under 2 years), 50 per cent.; appendicitis, 50 per cent.; cirrhosis, 50 per cent.; suicide, 50 per cent.; Bright's disease, 25 per cent.

Thus it appears that in a general way the greater causes of death in the country arise from exposure, bad water and drainage, epidemic diseases of childhood, mental breakdown due to old age, and perhaps a lack of appreciation of hygienic precautions in the treatment of the diseases. On the other hand, the excessive rates in cities would appear to be connected with sedentary occupations and overeating, the social evil, improper food and unsanitary conditions of infancy, and crowd suggestion as seen in suicide.

4. *In only eight out of thirty-six causes of death does the country exceed the city in the number of deaths.* These causes are typhoid, malarial fevers, smallpox, measles, whooping cough, influenza, cerebral hemorrhage and softening, puerperal affections other than puerperal fever, and suicide. But since the country has slightly more than its share of all other causes, it is possible that it may have a higher death-rate in some of those cases. The report for 1910 does not give the death-rate for the various causes, but making a rough calculation from the number of deaths under each cause on the basis of the population for urban and rural regions, it appears that in the cases of the eight causes in which the rural death-rate exceeds the urban, the excess rate would be about as follows: Typhoid fever, small excess; malarial fever, 200 per cent.; smallpox, slight excess; measles, slight excess; whooping cough, 50 per cent.; influenza, 100 per cent.; cerebral hemorrhage and softening, 25 per cent.; puerperal affections other than puerperal fever, slight excess.

5. *Differences in death-rate between country and city exist relative to nativity.* Negroes appear to be especially susceptible to death conditions in cities. This is shown in table 8.

TABLE 8[6]

DEATH-RATES PER 1,000 POPULATION, BY RACE, NATIVITY, AND NATIVITY OF PARENTS, IN COUNTRY AND CITY — 1900

	Total	White	Negro, Indian & Mongolian	White		Native-White	
				Native	Foreign born	Both Parents native	One or both Parents Foreign born
Cities ..	18.6	18.4	27.6	18.3	18.5	17.5	19.0
Rural ..	15.4	15.3	19.0	14.9	17.8	15.6	12.7

Farmers and farm labourers register a lower death-rate than any other occupation, except that of boot and shoe workers.

Contact with Nature.— This is closely associated with out-of-door life but it is a distinct concept. We have the thought of the results on the psychical qualities of life which ensue from a close association with the things of the out-of-door world. Love of nature may well be the inheritance of the city-born and city-bred person. But how much such a nature would be enriched by a continuous association with the beauties of landscape, the sympathetic friendships of animal friends and dependents, the observations of growing plant and animal life, and the thrill arising from the powerful and spectacular demonstrations of nature's powers in storm and tempest. To the one who has the soul to respond there is no situation which offers a finer satisfaction and a more profound feeling of intimacy and kinship with the cosmos than that of being in the presence of springing grass and swelling bud of early spring. These are elements which appeal to the housed-up being and constantly threaten to draw him away to the country.

That the advantages of this contact with nature finds much appreciation on the part of those who dwell in the country

[6] *Twelfth Census*, Vol. III, pp. lvii, lxx, lxxiv, and 286.

is denoted by the replies of the Cornell students who had lived on the farm. Remarking on the replies received from those who expected to farm, the investigator says: "Nearly every one of them gives higher ideals of living as the propelling motive, and these ideals crystallise about two points,—the love of nature, and the desire of a free independent life." [7]

Greater Exemption from Social Evils.—The country is relatively free from certain social evils which beset the cities.

1. The "slum" with its attendant poverty, congestion, bad housing conditions, debauchery and vice is the usual concomitant of the cities of any considerable size. The country has hardly anything which corresponds to this, although there are occasional small communities which are backward and sometimes vicious. Outside the slum areas of the cities are other large regions where life conditions are but little better, where the population live on the very verge of dependency and to be out of work a few days is viewed as a calamity. The general conditions of country life are much better and safer. Only in restricted areas would a crop failure imperil the economic status.

2. There is also the "social evil," preëminently, which exists as a putrid sore in the midst of the average urban community. This scarcely exists in rural regions, at least in the open-air portions.

The advantageous position the rural region occupies relative to pathological conditions is made increasingly obvious by comparing it with city populations.

3. Statistics of the number of paupers in the United States are inadequate. The government reports cover those which are inmates of almshouses only. It is well known to charity workers and poor overseers that a very large proportion of dependents are cared for under the heading of "outdoor" relief. In many counties of the newer states

[7] Bailey, "The Training of Farmers," pp. 123, 124, 135.

almshouses have not been built. As a consequence relief work is of the "outdoor" kind. Hence an occupational distribution of paupers in almshouses gives but a partial index of the degree of country and urban pauperism. Yet it is valuable and probably approximately representative of what would be the case if we had complete data. It is found that in the year 1904 "agriculture, transportation, and other outdoor" occupations account for but 23.7 per cent. of all paupers at least ten years of age whose occupation prior to admission to the almshouse was known.[8] In other words, while the country possesses over one-half of the population, it produces less than one-fourth of the paupers of the nation.

4. No direct statistics of crime as distinctively rural or urban are available. The matter has to be arrived at by indirect methods. While the distribution of prisoners in the penal institutions of the United States is not an absolute measure it is nevertheless a very good indication. We find that agriculture, transportation, and other outdoor occupations furnish but 17.2 per cent. of all male prisoners. When we remember that approximately 54 per cent. of our population dwells in the open country and in towns of 2,500 or less, and when we make a reduction of 17.2 per cent. because of the amount "transportation and other outdoor" occupations contribute, it becomes evident that the agricultural regions send to prisons a small minimum of what their population warrants. Relative to female prisoners the case is more vague. "All other occupations" in which agriculture is classed furnishes 9 per cent. of all female prisoners. What portion of these hail from the country is not known.[9]

5. General and reliable statistics of insanity are few. The national government offers us very little. An inspection of its data for 1880 and 1890 reveals practically nothing

[8] Special Census Report on "Paupers in Almshouses," Table XXVII.

[9] Special Census Report on "Prisoners and Juvenile Delinquents in Institutions," 1904, Tables XXVI and XXVII.

on whether country or city is the more productive of insanity. The total number of insane persons enumerated in the North Atlantic, South Atlantic, North Central, South Central, and Western divisions in 1890 per 100,000 population were respectively, 238.6, 132.2, 164.8, 95.9, and 194.1; in 1880, 247.5, 151.1, 171.7, 125.7, and 200.8. The agricultural divisions, except the Western, register a lower rate than city divisions. California's excessively large rate in 1880 and that of California and Nevada in 1890 account for this exception.[10]

The census of 1890 shows that there were 1,700 insane persons for each million of the population, while in cities of over 50,000 there were 2,429 insane per million.[11] "The probabilities are that per capita of population there is less insanity in the country than in the city. The report of the New York State Commission of Lunacy for the year 1908 shows that of all those admitted to the state hospitals 76.5 per cent. came from the city and 23.5 per cent. came from the country. From this statement we should expect to find about one-fourth of the patients with each form of insanity coming from the country. Such is not the case. The same report states that ninety per cent. of all the cases of general paralysis or softening of the brain" admitted in that year came from the cities; that 81 per cent. of insanity cases among the men produced by alcohol were from the city, while 96 per cent. of such cases among women hailed from that source. The country produces a larger portion of insanity known as "melancholia" and "senile dementia" (insanity of old age) than the city.[12]

6. *Suicide.*— According to the statistics of suicide which

[10] Special Census Report on "Insane and Feeble-minded," p. 9, Table IV.

[11] C. A. Ellwoood, "Sociology and Social Problems," second edition, pp. 274–5.

[12] "Rural Insanity," E. S. Elwood, *Rural Manhood*, May, 1914, p. 144.

have been gathered in the registration area of the United States, suicides are much more frequent in urban than in rural communities. A study of statistics shows that suicides are generally about twice as numerous in large cities as in the country. In only one instance, in Rhode Island for 1906, does the country show a larger percentage than cities. It must be remembered that Rhode Island has very little territory that strictly can be termed rural.

7. *Marriage and Divorce.*— The census of 1910 has made it possible to compare the country and city relative to marital conditions. Both marriage and divorce are matters of growing concern at the present time. A growing and morally healthy population is dependent on the normal occurrence of marriage. A declining marriage-rate and the postponement of marriage are conditions which provoke anxiety in whatever nation or community they occur. Likewise an increasing or a high divorce-rate are commonly viewed as menaces to society.

The accompanying table (Table 9) gives the percentage of males and females who are married in each age-group for urban and rural regions. It shows, first, that as a whole the rural rate exceeds that of the city; and, second, that in each age-group for both males and females the urban section sustains a lower rate. That marriage occurs earlier in the country is indicated by the heavy percentages for the country in the earlier ages. Since the most fecund period for women lies in those ages, the bearing on population increase is obvious.

Statistics of divorce for the nation as a whole for country and city demonstrates that the rural districts sustain a lower divorce-rate than do cities. Recorded on the basis of 100,000, the city rate for males is about 503, for females about 724; the rural rate for males is about 464, for females about 527.[18]

[18] Abstract Thirteenth Census, p. 163.

TABLE 9 [14]

MARRIAGE RATE IN COUNTRY AND CITY — 1910

Males 15 Years of Age and Over

Community	15 yrs. and over	15–19	20–24	25–34	35–44	45–64	65+	Age unknown
Urban	54.7	0.7	20.6	59.5	77.5	79.7	64.2	19.0
Rural	56.8	1.4	27.3	66.5	81.0	81.3	66.6	30.8

Females 15 Years and Over

Community	15 yrs. and over	15–19	20–24	25–34	35–44	45–64	65+	Age unknown
Urban	54.6	7.7	42.4	69.6	75.4	64.1	29.6	33.6
Rural	63.3	14.3	57.5	81.4	85.6	76.1	39.7	45.1

Out of twenty-eight states having city counties but three — New York, Pennsylvania, and Oregon — showed a larger country than city divorce-rate. The same condition has been generally true in the census decades from 1860 to 1900. At the census of 1900, city counties in these typical states showed an excess divorce rate per 100,000 population over rural counties as follows: Massachusetts 20, Maryland 27, Georgia 24, Indiana 99, Nebraska 96, Colorado 49, Washington 104.[15]

A further consideration shows that while the increase of divorce rate has been greatest in city counties from 1870 to 1900 there has been a decided growth in that of other counties.[16]

8. *Special Problems.*— The country is exempt from many of the special problems of utility corporations, of capital and labour, although it has its own labour problem, and from psychic epidemics and crazes to which the city is prone. It is beset with less of tendency to competition in ostentatious display which manifests itself in wasteful expenditures of fashion, in riotous feasting and entertaining, and in

[14] Abstract Thirteenth Census, p. 163.

[15] Special Report on Marriages and Divorce, Vol. I, p. 18.

[16] *Ibid.*, p. 19.

the various forms of conspicuous consumption brought about by social rivalry.

Greater Possibility of Independence and of Individual Initiative.— Farming is the freest and most independent of the larger callings of life. This does not mean that the agriculturist is not under restraint due to the social order. It does mean that he is less beholden to the immediate actions and attitudes, the beliefs, prejudices, and whims of his fellows in carrying on his work than most other workers. Given the ownership of his land or the possession as a renter for a year and within the year or years he conducts operations he is largely outside the immediate influences of other occupations, or other workers in his line. He is not likely to ejectment and so long as he keeps within moral bounds he is possessor of almost unlimited liberty. Social conventions, political influence, threat of boycott, do not hinder him from undertaking and carrying out the processes of crop or plant culture as he sees fit.

What is true of the owner and manager also very largely obtains in the case of the hired labourer. While his tasks are set him from day to day he is usually sent to initiate and execute those tasks alone, and large possibilities of variety in execution and performance are open to him. His position is far different from that of the day labourer working under a boss or an artisan working in conjunction with a machine which constantly impose the exact prescriptions as to how the task is to be carried out.

Scope for Scientific and Intellectual Development.— It is often stated that the farmer is favourably situated to command the time and opportunity to become scientifically well informed and mature in his intellectual life. It would scarcely be disputed that the exceptional agriculturist is thus favourably placed. The farmer who has wealth enough to enable him to become manager of his undertaking, employing hired help to do the work, doubtless, if so disposed, would

be able to carry on experimental work of a very valuable sort. Much of our agricultural advance has been brought about in this way. Such a farmer would also have much time for reading and meditation of an advanced sort.

The average farmer has little leisure for observation and experiment. He does the larger part of his own labour, his hours are long, and his energies are so spent that he is not prepared to carry on reading or heavy deliberation at night or on Sunday. There are many cases, however, of individuals who are situated so that while they are their own workmen and undertakers, they have used the winter months for reading along the lines of scientific agriculture; and in the cropping season they have put into effect the insight they have gained. These men have learned that a larger use of intellect and science in their farming operations shortens their hours of labour, lessens their work, and gives them larger possibilities of scientific and intellectual advance. Many of these men have become leaders of their communities in the associations of farmers and wield an influence which makes for progress. It is as great a satisfaction to meet a man of this type as to meet a successful and progressive business man. The same substantial qualities and alertness in a given field are conspicuous. The fact that men of this kind are multiplying augurs well for the future of rural communities.

Better Conditions for Family Life.— We must recognise the backwardness relative to country homes at the same time we note their advantages. The disadvantages will be presented later. The chief favourable items are the following:

1. A safe place to rear children. There is relative freedom from contaminating associations of the more vicious and perilous sort. The country has occasional bad characters. It may have lower ideals in matters of conversation than the best sections of the cities. But it has no festering sores of

immorality and it is comparatively free from gangs of young criminals who contaminate the play of childhood. Childhood in the country is not subject to the danger of those radical or continuous evils which beset the city.

2. Country home life offers a saner and more practical training for children than does that of the city. One of the recognised shortcomings of city life lies in the inability of the homes to yield the practical training which after life will demand. The schools have been academic. The homes have nothing for the boys to do outside of school hours. Hence one of the newer educational demands has been manual training as a means of giving this practical element. The country boy does not lack here. There is plenty to do. Chores of one sort or another exist to keep him busy during holidays and vacations. These are a very part of the business of farming. They employ the time of the boys, keep them out of evil associations, and secure a valuable factor in training.

3. Training through family coöperation. Unlike the city family, all members of the country family have something to do. In towns probably the eldest girl may participate in the household work. The younger daughters and the sons have practically no household or domestic function. On the farm a division of labour exists, each member taking his or her place as soon as old enough. The institution expands as fast as active members are developed. All coöperate for the common purpose of keeping the institution running. This offers a valuable feature in building the ethical and social qualities of citizenship, although on a narrow basis.

Economic Advantages.— The decision of the question of whether or not farm life is economically advantageous is dependent on the point of view or the ideal of life which is held; also upon taking into account whether the masses who engage in farming are, on the whole, better off financially and in getting a living than the masses who dwell in cities.

A brief discussion of these considerations occurs below under Economic Disadvantages.

II. DISADVANTAGES OF FARM LIFE

The best way to get problems settled is to face all the facts in the situation, however grave and disagreeable. It cannot be denied that farming has its drawbacks. These have been exploited and perhaps may have been exaggerated.

The Economic Disadvantages.— Of the 155 replies to the question, "Why do boys leave the farm?" put to students of Cornell University, 62 said that farming does not pay; there is no money in it.

Is this true? It is true in this sense. There is not the possibility of making the extremely large fortunes that there is in industry or commerce. Farmers as such seldom get to be millionaires and multi-millionaires. There is not the opportunity for exploitation of other classes that exists — unfortunately — in the business world. Agriculture is not a business that lends itself readily to amassing large profits through speculative undertakings. Persons viewing farming as a means to gain great wealth in a little time should look elsewhere. However, such ideals of life are low, and it is to be hoped that in the not remote future no line of human undertaking will remain so exempt from state control as to offer such a field.

While agriculture does not present the chance to obtain great fortunes in a few years, which is commonly the index of illegitimacy in business, it does promise a comfortable living for most of those who engage in it; and a substantial increase in wealth from year to year. Occasionally, in portions of our nation, farmers have grown wealthy within a few years. There is no other business which makes as good a living for as great a number as farming.

Another side of this matter appears in the perquisites, or what goes along with farming as a part of the living, but

for which country dwellers pay little. No inconsiderable portion of the food on the farmer's table comes from the garden, the orchard, the vines, the cow, and the poultry. Not much effort may be made to make these factors earn an outright income, but they take the place of a large share of the income which urbanites expend for their purchase. These advantages, together with others, are coming to consciousness, and it is apparent in the chronicles of the times that there are multitudes of city dwellers who recognise them and would fain migrate to the country, could the way be made certain.

The relative defencelessness of farmers against the encroachments of other classes is a point made against farming. It is indeed a legitimate objection. To be charged higher prices and interest rates than others pay, to be numerically strong and productive of the larger part of traffic for the railways of the nation and yet to have traffic rates imposed at will by railway managers, is certainly disadvantageous. In some of these things the farming class is not alone. Most other users of transportation facilites are quite as helpless as to control of rates. Teachers, lawyers, doctors, and others, also, have to bear the same prices for goods in the country towns and villages.

Physical Labour.— The hard work connected with farming is often invoked against it. Those who have lived on farms will probably grant that this accusation is true. It obtains for both men and women. As agriculture has been conducted, it has been characterised by long hours of labour under disagreeable conditions. At times there is likely to be a special rush of work, when everyone, who is old enough to do anything, is drafted; and the measure of the day is from dark to dark. Such times are seeding, harvesting, haying, and threshing. The appropriate climatic conditions must be seized. Should they pass great loss might ensue.

Certain of these times are likely to be strenuous for women.

At those critical points additional farm labour is engaged. This imposes more work in food preparation, waiting on table, dishwashing, and care of sleeping places. Some of the chores may also fall upon the housekeepers to give the men more time in the fields.

There are also forms of farm activities which are rated as exceptionally arduous. Such are pitching grain and hay — especially some of the long grasses such as timothy and German millet; shocking grain; clearing ground of stumps and stones; husking corn, particularly in very cold weather when the hands are checked and sore; and in household work, washing, ironing, and cooking for large crews of workers.

There are frequent disagreeable conditions under which work must be done. Working in the field in windy, dusty weather, when eyes and nostrils are clogged with dust and the skin made to sting by the driving particles is one of the most disagreeable tasks. Frequently the work must be carried on under conditions of cold or of rain which make it not only disagreeable but detrimental to health. Then, also, the farmer who keeps some stock and garden has additional labour. The milking of cows, the care of the work- and other horses, the feeding of the hogs, constitute the chores of evening and morning which make such a drain on time and energy.

It may be questioned, however, if the life of the farmer is at all to be compared for severity with that of the miners, of railway workers, of factory men,— especially in steel and other metal mills — and of teamsters. It is also probable that farmers put in unnecessarily long hours. A tradition has come down from the past that the day must extend from sun to sun or from twilight to twilight. The pace is likely to be reduced in proportion to the length of the day. Some farmers work short hours and increase the pace in a corresponding measure. They accomplish as much and have a larger leisure.

Social Disadvantages.— The lack of the larger associational privileges is one of the greatest handicaps to agriculture. The work of the farm is carried on for most part in isolation. Where a life with social advantages presents itself farming is likely to become correspondingly distasteful. Much of the arduous labour of the world, such as the underground work of mining, is rendered bearable by the presence of other workers. On farms, the times when a number of persons are thrown together, as in threshing, is looked upon as a kind of oasis in an otherwise barren life. Could the work of agriculture be carried on in groups it would no doubt be rendered thereby more attractive.

Beyond the isolatedness of conducting the necessary activities, the hours of leisure and rest are deprived of the larger associational opportunities. There are no common lounging places where the workers meet. It takes effort to go to a neighbour's for comradeship when he lives the equivalent of a score of blocks away. The neighbouring of women is thereby restricted. The next door neighbour, where one would like to "run in" for a few minutes daily, is across farms.

Social gatherings and places of meeting are infrequent. Few people or none pass the farm. The multitudes of ways and places of meeting of the city are absent. Life seems monotonous, lean, and lonesome to those who love friendship and companionship.

Undertakings of the humanitarian and associational sort are almost wholly absent. The chance to shine in society, the opportunity to become famous by acting, speaking, writing, discovering, seem to be in cities. Benevolent and welfare work are evidently little called for where people make a living and do not congest in slums. Life does not, on the surface, offer opportunities of fame, greatness, or nobility of character.

Personal Characteristics which Come from Isolation.— It is not to be supposed that dwelling apart as farmers do creates

any inherent or intrinsic differentiating effects in their minds. In constitution and structure the mind of the farmer is not different from that of the urban resident. The framework of the minds of human beings under quite diverse circumstances remain similar. Ethnologists hold that the minds of primitive peoples are, in constitution and framework, identical with those of civilised men. It is the divergence in the technique which surrounds and offers opportunity for development to the individuals of the respective groups which explains the differences of mind.

Probably most of the characteristics which obtain among farming populations may be accounted for in terms of isolation and occupation. Concerning isolation, we have to deal only with the relative form, and we need not look for the effects which arise from absolute isolation such as is seen in solitary confinement, or in herding often. We have previously noted the opposing views which are maintained as to whether farming communities are more or less addicted to mob-mindedness than those of the city. In cases where they seem to be it is to be explained by the homogeneity of the population rather than by its isolation. Among the more undesirable traits of farming populations may be mentioned those given by Butterfield, namely, conservatism, and, at times, intense radicalism, deep-seated prejudices, and a tendency to brood over more or less imaginary injuries.

The farmer is in direct contact with the operation of the elements of nature and doubtless his mind is influenced by the way the forces work, by the routine of the seasons, the course and force of the winds, the dependence of crops and his prosperity on rainfall and other climatic conditions. Crop failures and poor prices for products often account for changing political views. Dependence on the mechanism of Nature, on the time of the opening of spring and the arrival of winter, on the quality of the season for growing and maturing produce, on bounteous yields or failures, all of which

phenomena are beyond his control, is calculated to impress the farmer's mind with the necessary order of the universe. It may make him moody, discouraged, pessimistic, fatalistic, and resigned.

There is a notable characteristic of farm women which distinguishes them from city women and which may or may not be considered a disadvantage, according to the point of view maintained. It is that she depends less on display in the way of dress, equipage, and house furnishings than on tracing her lineage to some remote ancestor. Her family stock, line, or name is looked to to give superiority in social matters.

This characteristic is evidently the result of living where apparel of a rich and impressive nature, or elegant carriage and horses, or exquisitely furnished house have very little opportunity of striking admiration and envy into other feminine hearts. Exhibiting the height of a family tree is more possible in the country, and whether or not superior ethically to the other form of ostentation, it at least has the advantage of being more economical.

REFERENCES

Bailey. "Training of the Farmer," Part II.

Butterfield. "Chapters in Rural Progress," Chap. 2.

McDougall. "Social Psychology," pp. 335–6; 343–4.

"Kentucky Mountaineers and Other Feuds," *American Journal of Sociology*, Vol. VII:1–28; 171–87.

Williams. "A Theory of Social Motives," *Ibid.*, Vol. XV:745–6; 750–51; 770.

Fisher, Irving. "Report on National Vitality."

Mangold, G. B. "Child Problems."

Twelfth Census, "Vital Statistics," Pt. I, p. xxxiii ff.

Twelfth Census, Vol. III, pp. lxxx, lvii, lxx, lxxiv, 262, and 286.

"Mortality Statistics," U. S. Dept. of Commerce and Labor, 1907, 1911, 1912.

Twelfth Census, Vol. II, pp. lxxxviii-lxxxix.

Special Report of Census Office, "Marriage and Divorce," pp. 9, 18, 19.

Special Census Report, "Paupers in Almshouses," Table XXVII.

Special Census Report, "Insane and Feebleminded," p. 9, Table IV.

Ellwood, C. A. "Sociology and Social Problems."

Elwood, E. S. "Rural Insanity," *Rural Manhood*, May, 1911.

Special Census Report, "Prisoners and Juvenile Delinquents in Institutions," 1904, Tables XXVI and XXVII.

Abstract of the Thirteenth Census.

CHAPTER VIII

IMPROVEMENT OF AGRICULTURAL PRODUCTION

The subject of this chapter, from an economic point of view, might include almost everything which may be said relative to rural social betterment. It is likely that if all matters of living pertaining to the home, the school, the church, the neighbourhood, to refining tastes and heightening culture, could be improved and put into operation, not only would country existence be raised in attractiveness and satisfaction, but the material gains from the occupation of agriculture would be significantly increased. Our purpose is to view the matter from the sociological direction and show not only what agricultural improvement consists in, but what it means for the life of civilisation and the farm.

I. SOCIOLOGICAL IMPLICATION OF AGRICULTURE

Importance of Applying Social Achievements.— Sociology considers society in its wholeness, and the acts and work of individuals as influencing the quality of the group or groups to which they belong. It is essentially a value study. Consequently rural sociology must consider agriculture on its material side in so far as it is seen to affect the quality of collective life. What it treats relative to methods of farming is in the way of demonstrating the truth of its position that farming can and ought to be improved so that the larger interests of life may thrive accordingly.

There is a direct connection between man's inventive powers and social evolution. Man's inventive genius is absorbed chiefly in discovering agencies and methods by means of which the forces of nature may be mastered by man and put to

work for him. From the fact that material civilisation has doubled and trebled during the last hundred years, we may also conclude that the ratio of the increase of civilisation bears some proportion to the cultivation of the inventive powers and of their application to the control of nature. If the essence of society consists in achievements, this becomes quite apparent. Achievements are ways or means of accomplishing things. They are not material but ideal, and consist of the plans or intellectual principles according to which material and other instruments are built. Civilisation consists of all these ideal existences. Material inventions are not the only achievements.

Others are seen in political or governmental devices, those which consist of plans for regulating the actions of men by collective action; social devices for amelioration by private enterprise; literary devices as seen in plans for articles and books; and so on. But while all are important, their influence in changing conditions of life and in producing progress are far less than the inventions which are directed to the control of nature. The civilisation which may be roughly termed "spiritual," consisting in the speculative and dogmatic elements, are conditioned by the others. They do not change fundamental situations of life as do the others. Compare Oriental society where philosophy and faiths have flourished for ages, as never in the western world, with western society after the invention of the railway. The former has remained inert and passive. It seems powerless before the advances of the Occident, notwithstanding the hundreds of millions of people whom it includes.

The amount of subsistence of a given region increases with the improvement of scientific methods. As an illustration of this let a comparison be made of the population any one of our states or the whole United States could support previous to the settlement by Europeans and what they support now. The aborigines who inhabited America were in a stage

of barbarism and upper savagery. They hunted, fished, and pursued crude methods of agriculture. It is estimated that the total population of the United States amounted to between one and two million people. Not a very much greater population could have been sustained with the methods in use. Where then a few thousand souls resided we now count our people by the million. This has been made possible by utilising the land and resources in a closer and more intense manner. The increase has come about through the progress which has been made in applied science, particularly in scientific agriculture.

Our population has abundant room for growth when we become scientific in our agricultural methods. Each farmer will farm less land, but he will raise as much as now and several agriculturists will live and work where now there is one. Granting that the preceding statement is true in essential characteristics, it becomes evident that the social advance of rural regions is, to an important degree, dependent on the progress of their material conditions. Other things being equal, the community which manifests most vigour and progress in improving its methods of production, will also be likely to show the greatest vigour and vitality in promoting its general social welfare. The "sinews of war," the substance and means necessary to develop a high grade of school, of church, of culture, and entertainment, must come out of the soil; and it is the scientific and progressive community which comes into possession of those means.

Benefits of Improved Foods.— Besides affecting his own immediate group welfare, as well as his own, by the amount and quality of his production, the farmer also touches the health and vigour of the larger social world in these matters. He should be well informed on food values because he is in the business of supplying food for the sustenance of the world. "He is preëminently the purveyor of the race. If the material which he provides falls below normal, the race to a

proportionate degree loses in vitality. If he maintains the integrity of the elements in his products, permanency is secured. If he increases the nutritive value of his food supplies so that when prepared for the table they will afford so many more units of what is best for the body, so many more of muscular strength, so many of vitality, then he is leading the world upward in the betterment of his crops." Men are now engaging in the study of foods with great zest. In nearly all institutions of higher learning attention is given to it. "Scientific men, realising not only that great additions to human knowledge should follow researches along this line, but that out of the investigation should come vast good for the race, have followed these lines of work with keen interest. To-day the results of these investigations may be the property of the tillers of the soil." [1]

The economic results of food value improvements should be considerable to the farmer. And better foods must prove conducive to the lessening of dyspepsia, indigestion, and all ailments which flow out of poor foods. This would wonderfully increase the sum of happiness of the human world.

II. PRACTICAL IMPORTANCE OF PROBLEMS OF PRODUCTION

Contributing Causes.— The question of the improvement of agricultural production is worthy of consideration, not only because it is the basis of the well being of farm families and neighbourhoods but because it has a national significance. This larger import of the subject has become conspicuous because of two fundamental considerations. First, because of the decrease in the amount of food exported from the United States covering a number of years and because of the more recently appearing importation of food stuffs from outside countries. We still export large quantities of food stuffs, such as lard, cured pork, fresh fruit, especially apples, corn, wheat, and flour. Pork, corn, and lard exports

[1] Harwood, "New Earth," Chap. 14.

have about held their own during the last decade up to 1912; the exportation of apples has increased enormously; but that of beef, wheat, and flour has fallen off heavily.[2]

When we survey the whole field of the world's population and production, and more especially the growth of population, of urbanisation, and the practical exhaustion of available and cheap land in the United States, one thing becomes evident. It is clear that the United States is unlikely to become again as great an exporter of food stuffs as it has been in the past, and that only a revolution in the process of producing articles of food on the farms can avert a further decline in the amount of food stuffs sent out of this country.

Second, the steady heightening of the cost of living, and particularly of the prices of the foods on which the majority of the population depends has emphasised the importance of agricultural production. Prices have risen about 50 per cent. in recent years and all persons of small incomes feel the pressure. This elevation of prices is a world phenomenon and the people of the United States suffer along with those of other advanced nations. Relative to articles of food, prices have advanced between 1900 and 1910 40 per cent. for the United States, 28 per cent. for Germany, 35 per cent. for Austria, and 45 per cent. for Canada. The wholesale prices on forty-seven articles in the United States advanced from index number 88 to 115 between the years of 1896 to 1912. That the cost of living may not yet have attained its greatest heights is obvious when it is remembered that the index figure stood at 152 in 1873.[3]

Relative to consumers, the retail prices are better indexes of the cost of living than are wholesale prices. The retail price index on 15 essential articles of food in the United States from 1893 to 1911 is shown in the accompanying table (Table 10).

[2] "Year Book," Dep. of Agriculture, 1912, pp. 22–5; and 712 ff.

[3] *Sci. Amer.*, March 21, 1914.

TABLE 10[4]

RETAIL PRICES, UNITED STATES, 1893–1911

Articles.	1893	1911
Sirloin Steak	99.4	132.8
Round Steak	98.5	149.6
Rib Roast	98.4	137.4
Pork Chops	105.0	155.4
Smoked Bacon	108.9	187.8
Smoked Ham	107.1	150.9
Pure Lard	119.2	141.3
Ham	104.3	142.9
Wheat Flour	95.1	129.5
Corn Meal	104.0	151.9
Fresh Eggs	105.5	207.3
Creamery Butter	108.6	159.5
Irish Potatoes	111.8	159.0
Granulated Sugar	102.6	118.2
Fresh Milk	100.5	135.00
Average	104.6	150.6

Changes in Relation of Production to Population.—What has been said on the decline in the exportation of food stuffs implies that there has been a change in the relation between population and food production in the United States. But that the population has been growing faster than food production has increased is seen in the fact that, between 1900 and 1910, the increase in the acreage of the crops grown was but 10 per cent., while the population of the nation increased about 21 per cent., over double the rate of acreage growth. During the same time there was little or no increase in the average production per acre, although the acre yield of some agricultural commodities enlarged. The production of cereals increased over 2 per cent., wheat acreage declined about one-sixth, and cattle and sheep fell off in large numbers.

[4] Retail prices, 1890–1911, Bul. U. S. Bureau of Labor, Whole No. 105; Pt. II, No. 1, pp. 351–358.

The causes of the relative decline in production are several: First, the tremendous speed with which urbanisation is proceeding. The facts and figures demonstrating this process were given in a previous chapter. This is probably the great fundamental cause of the relative overtaking of food production by the national population. Based, as it is, on increasing industrialism, which in turn is dependent on the developing scientific and technological processes, so far as we can now see, there appears to be no sufficient checking or reversing device available.

Second, subordinate causes are:

(a) The practical exhaustion of easily farmed and cheap public lands. As will be observed, when we come to discuss the amount of available land, the United States possesses an abundance of unsettled land which is more or less tillable. But much of this area will require capital to develop it and the expenditure of energy and labour far in excess of that which has been spent on the rich open prairies of the central part of our domain.

(b) Immigration. We are acquiring population from outside peoples at a prodigious rate. From 1904 to 1913 there entered our ports 8,903,460 immigrants. Estimating that but 60 per cent. of these became permanent residents, such bona fide settlers amounted to 5,340,076. It has been shown that immigration checks the increase of the native stock but it cannot be demonstrated that our population, had no immigrants come to our shores since the founding of the nation, would have been as large as it is to-day. And since by far the major portion of immigrants settle in cities, immigration adds to the population food consumers rather than food producers.

(c) Migration to cities from the country. This is a part of the process of urbanisation to be sure. But as in the case of immigration it adds to the consumption side of the balance. It is particularly effective in changing the relation of

population to production because it transforms those who otherwise would be food producers into food consumers.

(d) Failure of agriculture to improve its processes in keeping with the growing demand for food. Notwithstanding the fact that potentially agriculture is able to respond to heightened demands for food by the application of the demonstrated improved methods of farm production, and that in certain states and articles of production notable increases have occurred, the opposing fact remains that, as a whole, the yield of food articles per acre in the United States has not materially advanced.

III. ILLUSTRATIONS OF GAINS FROM SCIENCE APPLIED TO AGRICULTURAL PRODUCTION

General Increase in Production.— The apprehension that our nation will soon become dependent on other nations for food supplies has been alluded to in an early chapter. This apprehension has as its foundation the decreasing exports from this country of food stuffs, the probable increase of population in the next few decades, the rise in prices of food, and what is termed the defertilisation of the soil by poor methods of farming. If we may trust the statements made by governmental experts in agriculture there exists no immediate need for this apprehension; although there are profound reasons for inculcating a widespread knowledge of more intelligent methods of production.

"There has been an almost constant increase in the average production per acre of all of the principal crops in the United States during the last twenty years. This does not appear in every state for all varieties of crops, but it is particularly noticeable in the great staples. For example, during the twenty years from 1886 to 1905 the average production of corn per acre increased at a rate which quite or very nearly equalled the actual increase of population in ten states; the average yield of wheat per acre increased more rapidly

than the population in twenty-two states; oats, sixteen states; barley, fifteen states; rye, twenty-one states; buckwheat, eighteen states; potatoes, fifteen states, and hay, twenty-five states. . . . The failure of the increase in the cotton and tobacco crops to keep up with the increase in population is due more to the disposition of the growers than to the condition of the soil. . . .

"A marked change in the production per acre of all crops appeared in the decade 1896–1905 in comparison with the mean of the preceding ten years. The production per acre of corn increased 7.7 per cent.; of wheat, 6.3 per cent.; of oats, 15.6 per cent.; of barley, 11.1 per cent.; of rye, 21.3 per cent.; of buckwheat, 23.1 per cent.; of hay, 22 per cent.; of potatoes, 15.3 per cent.; of cotton, 3.8 per cent.; and of tobacco, 5.2 per cent."

From 1906 to 1909 weather conditions were unfavourable to a few crops. "In the case of other crops the mean production per acre continued to show large increases, the mean of these four years over that of the preceding ten years being an increase of 7.1 per cent. for corn, 9.6 per cent. for wheat, 6.5 per cent. for rye, 6.6 per cent. for buckwheat, 15.5 per cent. for potatoes, and 9.7 per cent. for tobacco." [5]

Coöperative Demonstration Work.— Advances in yields of crops have been due to enlightened methods of production. The Bureau of Plant Industry of the national Department of Agriculture in 1904 inaugurated in the South what came to be called The Farmers' Coöperative Demonstration Work. This has been extended to other parts of the nation since then. The coöperation is chiefly between individual farmers and the Government, although it also obtains between farmers.

"An agent goes into a territory and seeks a hard-working farmer, who, like his neighbours, fails from year to year in his crop. He persuades this man to sign a contract to work

[5] Quoted by Wm. E. Curtis in the Chicago *Record-Herald*, March 4, 1911.

a small portion of his farm, usually an acre, according to Government directions. This plot is called a 'demonstration farm,' and the farmer who cultivates it according to agreement a 'demonstrator' or 'coöperator.' . . . By his own work on an acre of ground under the scientific instructions of the Government, the man's life has been transformed, the lives of his children lifted to a higher plane, and conditions controlling the industry he represents made new for all time. The reason is plain. The acre which during the thirty years of his farming has never before produced more than fifteen bushels of corn, or one-fourth of a bale of cotton, has now produced seventy-five bushels of corn, or a bale of cotton. In some cases the sale of seed from this one acre will finance his entire crop the following year."

The general results of this coöperative plan and of improved methods of farming are impressive.

"The Demonstration Work extended over 53,436 acres cultivated in cotton and 39,058 in corn. The cotton represented an increase of about 13,750 bales and the corn 609,304 bushels. If the cotton averaged $60 a bale and the corn 80 cents a bushel, the gain on the former was $825,000 and on the latter $486,643.20, a total of $1,311,643.20. A large number of coöperators and demonstrators made no report upon which accurate statistics could be based, and the gain here shown is estimated to be about one-third of the actual gain, which means that nearly four million dollars above what they are accustomed to make went into the pockets of the farmers who used the Demonstration methods last year. And this does not represent the whole gain, because the cost of production was less. . . ." [6]

Soil Improvement.— Although some agricultural experts have gone on record against the use of certain kinds of fertilisers there can be no question that, in general, fertilisers must be regarded as necessary to recoup land that has been

[6] *Review of Reviews*, November, 1910, p. 570.

farmed for a long time, especially average land. The percentage of organic matter and of certain very essential inorganic substances, such as nitrogen, phosphoric acid, potash, and perhaps lime which were in the soil originally, is gradually reduced under incessant cultivation. The restoring to the soil of these organic and inorganic elements is as necessary to continued production as is the renewal of the circulation of the air in rooms inhabited by human beings.

One method of renewing soil fertility is the use of stable manure and waste part of the crops that are raised. But since much of the produce is sent to market it is evident that only a part of the properties of the soil which appear in crops is restored to it by manure and rotting stalks. Another method of restoring soil fertility is the rotation of crops. One kind of crop paves the way for another crop by depositing in the soil the properties that are demanded by the succeeding one. The difference of habits of plants in their root growth and their varying immunity to diseases and insects make successive plant culture desirable. Especially plants which are adopted to capture the nitrogen of the free air and store it in the soil, such as the legumes, are requisite agencies of soil rejuvenation.

Still another method of restoring soil fertility is the use of commercial fertilisers. "There has been a disposition on the part of many farmers to regard fertilisers only as stimulants, due to the irrational use of certain materials, but a good commercial fertiliser is a carrier of some or all of the necessary elements that we find in stable manures. They may carry nitrogen, phosphoric acid, or potash,— any one or two or three,— and the three are the constituents that usually are lacking in available form in our soils. Examples of the best modern skill in farming may be found in the national selection and use of commercial fertilisers." [7]

A further method of soil restorative or proper soil oxy-

[7] Agee, "Crops and Methods, of Soil Improvement," p. 10.

genation is that of drainage. "If the water from rains is held in the surface by an impervious stratum beneath, it is idle to spend money in other amendments until the difficulty respecting drainage has been overcome. A water-logged soil is helpless. It cannot provide available plant food, air, and warmth to plants. Under-drainage is urgently demanded when the level of dead water in the soil is near the surface. The area needing drainage is larger than most land-owners believe, and it increases as soils become older." [8]

Scientific agriculture depends on the testing of soils by appropriate methods to determine the constituents. Soils differ as to their properties, a given soil being poor in lime, or phosphoric acid, or nitrogen or potash or other elements. In order to rectify the particular impoverished condition scientific tests are requisite. Thus the litmus paper test is an available one to determine the sufficiency of lime in the soil. Tests of other kinds are requisite for the different properties or kinds of soils.

Agricultural experts advise farmers to conduct some fertiliser tests for himself because only the soils themselves are able to make an adequate reply as to what soil constituent is lacking. The tests should be made under evenness of conditions and should cover a period of years. "There are only three plant constituents to be tested, but they must be used in combination as well as singly. A soil that is deficient in the three may not give any return from potash alone, and usually does not, although it may give a marked increase from use of phosphoric acid alone. The plats may be eight rods long and one rod wide, containing each one-twentieth of an acre, and having strips two feet wide separating them. The accompanying chart (Table 11) suggests quantities of fertilisers to be used on the one-twentieth acre plats, 10 in number.

But one or two examples can be given of the efficacy of

[8] Agee, "Crops and Methods of Soil Improvement," p. 12.

fertilisers in increasing production. The matter is so well attested that little demonstration is required.

The Cornell station reports an illustration of the value of manure and commercial fertilisers applied to land that had a lime deficiency. "The soil was once a fertile loam that had become very poor. A part was given an application of lime and similar land at its side was left unlimed. The land without lime and fertiliser of any kind made a yield of 1,824 pounds of clover hay per acre. A complete fertiliser on the unlimed land made the yield 2,235 pounds, and 15 tons of manure on the unlimed land made the yield 2,091 pounds.

Where the lime had been applied, the unfertilised land yielded 3,852 pounds per acre, the fertilised, 4,085 pounds, and the manured, 4,976 pounds. The manure and fertiliser were merely inactive in the soil, e.g., soil that lacks a proper amount of lime. "The lime enabled the plants to obtain benefit from the plant food." [9]

The practical importance of the use of legumes to enrich the soil is observed in the report of the Nebraska Agricultural College:

TABLE 11 [10]

FERTILIZING ELEMENTS FOR EXPERIMENTAL PLATS

Nothing
5 pounds nitrate of soda
18 pounds 14 per cent. acid phosphate
4 pounds muriate of potash
Nothing
5 pounds nitrate of soda 18 pounds 14 per cent. acid phosphate
5 pounds nitrate of soda 4 pounds muriate of potash

[9] Agee, "Crops and Methods of Soil Improvement," pp. 16–17.
[10] *Ibid.*, pp. 167–8.

18 pounds 14 per cent. acid phosphate 4 pounds muriate of potash
5 pounds nitrate of soda 18 pounds 14 per cent. acid phosphate 4 pounds muriate of potash
Nothing

"Reports from thirty-one Nebraska farmers from 1906 to 1908 show that they had an average yield of thirty-four and one-half bushels of corn per acre on land before seeding it to clover and alfalfa and sixty-eight and two-tenths bushels when the field was ploughed up and again planted to corn. Coöperative fertiliser tests carried on by this department on Nebraska farms show that the plots which were not treated averaged twenty-five bushels of corn per acre, while the ones to which barnyard manure had been added gave an average yield of thirty-six and one-half bushels."

Elimination of Pests.— The United States Government Department of Agriculture has developed what is termed the science of parasitology. It has discovered that plant pests may be combated by means of parasites which naturally prey upon them. By coöperation with the Government farmers may secure relief from the disasters of particular pests whose parasitic enemies have been definitely discovered. The San José scale has been successfully combated by the importation of a red and black lady-bird from Australia, the Noviris Cardinalis, thus saving the orange crops of California. The boll-weevil, the fatal enemy of the cotton plant, is being combated with considerable success by an ichneumon fly which was the natural parasite of the rag weed weevil. By the destruction of adjoining rag weeds at the proper season the fly is made to deposit its eggs in the boll-weevil, with the result that from thirty to sixty per cent. of the pests have been destroyed where the work was carefully done. The Hessian fly has been reduced by furnishing a sufficient supply of its

parasite, a winged midget known as Polygnatus. Parasites to successfully oppose the ox warble, the chinch bug, the flour moth, the army moth, the striped cucumber beetle, the home-breaking moth, the peach tree borer, the house fly, and other pests remain to be discovered.

The enormous losses sustained from the operation of various pests may be seen from this statement of their annual depredations made by the United States Department of Agriculture, Table 12.

TABLE 12

LOSS FROM INSECTS

Cereals	$200,000,000
Hay	53,000,000
Cotton	60,000,000
Tobacco	5,300,000
Truck crops	53,000,000
Sugars	5,000,000
Fruits	27,000,000
Farm forests	11,000,000
Miscellaneous crops	5,800,000
Animal products	175,000,000
Natural forests and forest products	100,000,000
Total for the United States	$795,100,000

The annual value of all the products in these lines when the estimate was made equalled $5,551,000,000. The loss in those lines runs from ten to fifty per cent. This takes no account of the loss of employee's wages, that arising from attempted protection, injury to enterprises, and other items.[11]

Benefits from Improved Farm Machinery.— We shall elsewhere consider the benefits, in certain aspects, to be derived from the use of machinery on the farm. In this section our attention will be confined to the gains to production which its larger use entails.

By means of the investment of capital in the form of machinery the time and attention of a man is made doubly

[11] Harwood, "The New Earth," p. 101.

or trebly productive. In agriculture this has been manifestly true in the case of several, if not all, machines which have been devised for farm use. Perhaps the invention and adoption of the harvesting machine exemplifies this as forcibly as any other. This invention opened up the prairies of the West to cultivation and moved the tide of civilisation across the continent towards the Rockies decades and perhaps generations earlier than otherwise could have been the case. No doubt other implements, such as the improved plough, the cultivator, the drill, the thresher, and so on, have a share in this notable triumph. But it is readily seen, that in the use of the old form of harvesting and winnowing by means of the cradle and flail the labour of multitudes of our population would have been consumed which was actually released for further production.

The extent of the economies effected in production under the era of machine agriculture is thus stated: "To illustrate this, it is only necessary to state that in 1830 it required over three hours of labour to raise one bushel of wheat while in 1896 it required ten minutes, making a saving in the cost of labour in one bushel of wheat equal to the difference between 17¾ cents and 3½ cents. In 1850 the labour represented in a bushel of corn was four and one-half hours, while in 1894 it had been reduced to forty-one minutes. In 1860 the labour in one ton of hay in bales represented thirty-five and one-half hours, while in 1894 this labour was reduced to eleven and one-half hours, or from a cost of $3 in labour to $1.29."

As late as 1845 the people of the United States did not raise enough wheat for bread. "With the advent of the steel plough, the self-binding harvester, and the steam threshing machine there was a marked change in the producing power of the American people. The food supply increased from 4.33 bushels of wheat per person in 1845 to 5.5 bushels in 1859, 7.45 bushels in 1869, and became as high as 10 bushels

in 1889." At the same time the country lost in population relatively, 33 per cent. being on farms in 1900. The farmers produced enough food for themselves, for the other 67 per cent., and exported $960,000,000 worth in 1904. The larger part of this was due to improvement of farm machinery.

"A 110-horse-power machine ploughs, sows, and harrows at the same time a strip 30 feet wide at the rate of three or four miles an hour, turning over the soil at the rate of 80 to 100 acres a day, or under favourable conditions 10 to 12 acres an hour. It thus performs work which ordinarily requires 40 or 50 teams and men.[12]

The adoption of tractors on the farm is regarded as not only desirable but economical. Light motor tractors for all sorts of farm work, from ploughing in the field to hauling a load of hay to market, are among the novel developments in power vehicles for industrial purposes. A net saving of more than $100 a month with one of these tractors is reported. The same amount of work was performed with a three-ton farm tractor as could be done with four wagons and four teams. The original investment in the tractor was $2,500 as against $1,808 in the wagons, horses, and eight sets of harness, showing an initial extra expense of $692.

The total cost of operation and maintenance of four teams and four wagons is given as $424.73, while that of the tractor was actually only $321.29. This shows a net saving of $103.44. At this rate the difference in original investment would be wiped out in less than seven months, and at the end of the first year there would be a clear profit of $549.28 over and above the difference in the first cost. In two years the tractor would pay for itself in the saving in cost of operation and upkeep.

Abundant promise of a wide and successful application of

[12] "Farm Machinery as Labour Saver," C. J. Zinthes, "Encyl. of Amer. Agr., I, pp. 208–209.

electricity to the needs of the farm is held out by agricultural engineers. The farmer is a large user of power; he employs more implements and a greater variety of mechanical devices than anybody else. But until lately his unfamiliarity with power apparatus and the machinery manufacturer's unfamiliarity with farm methods and needs have stood in the way of an adjustment advantageous to both sides. This difficulty is now in a fair way of being overcome.

Isolated plants, comprising complete outfits driven by gas engines, are now on the market and are being widely introduced. Several central-station extension systems have been established in middle Illinois, from which electricity is being sold to farmers at the same rates as prevail in neighbouring towns. The day is at hand when a liberal supply of both light and power will be at the farmer's disposal. A speaker at a recent national meeting of engineers made the prediction that the farmer of the future would make his switchboard his general headquarters.

In these circumstances the contention is properly made that agricultural colleges should take a more progressive stand as regards the increasing use of electrical appliances on farms and should make agricultural engineering a more important feature of their curricula. Progress in farming and the improvement of the rural districts both depend in increasing measure on the recognition of this need.

Other Examples.— Interesting facts exist to indicate how other items of farm production may be bettered. New York State Agricultural College investigations have demonstrated that by "weeding out" inferior cows the returns from a herd was more than doubled; which, if extended over the state of New York would register a net increase to dairymen of $60,840,000 a year. Its investigations in butter-making indicate that the creamery business can be made much more profitable, increasing the moisture of butter from that of 9 per cent. to 14 per cent.; that poultry-raising can be profitably

improved; and that beneficial results of a decided nature arise from agricultural surveys. Irrigation, conservation of moisture by special methods or "dry farming," the drainage of swamps, and of low wet land to increase the yield, co-operation for the destruction of weeds, the destruction of rats the loss from which is said to be greater than from all other injurious mammals combined, the conservation and protection of useful birds, the treatment of special diseases of plants and of animals, are other items which the progressive farmer must consider in order to guard and advance his productive power.

REFERENCES

Weber, H. J. "Some Facts Concerning the New York State College of Agriculture." Ithaca, N. Y., March, 1910.

Bulletin of the Agricultural Experiment Station of Nebraska, Vol. XXIII, Art. VII.

Wallace, Alfred. "The Wonderful Nineteenth Century."

Ward, Lester F. "Pure Sociology."

Harwood. "The New Earth," Chap. 14, and p. 101.

Chicago *Record-Herald*, March 4, 1911; and February 3, 1911.

Review of Reviews, November, 1910. "Making Good Farmers out of Poor Ones."

Adams, S. H. "Warring on Injurious Insects." *American Magazine*, July, 1910.

Alva Agee. "Crops and Methods for Soil Improvement."

Abstract Thirteenth Census.

United States Bureau Labor Report, Whole No. 105; Pt. II, No. 1.

Sci. Amer., March, 1914.

"Year Book," Dep. Agriculture, 1912.

Sci. Amer., March, 1914.

The following Farmers' Bulletins of the U. S. Dept. of Agr. afford much valuable information:

Farm machinery and fuel, Nos. 268–9, 277, 303; Soil and soil improvement, Nos. 44, 77, 187, 245, 257, 266, 323, 326; Diversification, Nos. 242, 299, 310; Insect enemies, and helpful birds, Nos. 54, 79, 132, 145, 283; Diseases and pests, Nos. 28, 91, 297.

Ingersoll, Ernest. "Animal Competitors." Sturgis & Walton Co., N. Y. 1913.

CHAPTER IX

IMPROVEMENT OF THE BUSINESS SIDE OF FARMING

I. FARM MANAGEMENT

The statements which were made in the first part of the preceding chapter to demonstrate the social bearing of the increase of production need not be repeated here. It will be sufficient to remark that the business side of farming may prove to be an indispensable factor in bringing about any great advance in agricultural production. It affords a field for the exercise of brains. Foresight, acumen, and broad intelligence are primary elements in making agriculture a business as well as a science. Some of the phases of farm management appear identical with those of scientific production and the use of machinery which were previously considered.

Organisation of Factors of Production.— An important field of farm management is the organisation of the various factors to be used relative to each other. This includes, first, the proportion in which the factors of production shall be brought together. That means the "quantities of labour and capital-goods which should be expended upon a given area of land, the quantity of labour which should be associated with a given quantity of capital-goods, and the quantity of land, labour, and capital-goods which should be put under one management in order that the best results shall be attained." Second, the qualities of the above factors, of land, labour, and capital-goods, must be considered. The manager of the farm must determine what grades of land, labourers, horses, machines, and so on should be associated together.

The farmer and farm manager, whether they are combined

in one person or are separate functionaries, must view the undertaking of running a farm just as a banker would view a project of banking or a manufacturer would look upon prospective or actual manufacture. These individuals would look upon the respective business as an investment for their capital and ability. The business must be adjusted to the size of the field, and its different branches must be prosecuted on the exact scale, in that proportion relative to other branches, which will realise the largest return on the investment.

The average farmer certainly has not viewed himself as a capitalistic manager. He has often in a vague manner suspected that he was doing poorly. He has bemoaned his hard state in having to labour through the year and come to its end with little or nothing to show for it. In fact many farmers do not thrive as they should; and if they critically investigated all the facts in the case they would change their mode of existence or their method of procedure. A farmer in one of the West Central states, although he owns unencumbered a very fertile farm of 80 acres and rents about as much more, is a hard worker and raises good crops, clears only about $100 a year. His investment a year represents about $1,200 and he takes out about $500. This case is doubtless typical of the majority of farmers. W. J. Spillman, Chief of the Bureau of Farm Management, Federal Department of Agriculture, estimates the average farm income at $655 a year. Of this amount $1.00 a day represents the entire income of the farmer's labour. This is general throughout the United States, although as in the case of Illinois, where the invested capital is greater, the income of the farmer is greater. But it is obvious that generally farmers are a poorly paid class. It is to be remembered that these men and their families have a right to enjoy many things they do not have and to maintain a larger social life. It becomes plain, consequently, that

their attention should be directed to the consideration of their business as an investment; to discovering how they may make the best association of the factors of land, labour, and capital-goods; to the selection of these as to their quality; in short, how they may improve their management so as to make farming a profitable undertaking.

Farm Accounting.— If community and individual welfare depends on the degree of profitableness of agriculture, and if the profit is contingent on knowing the grade and quantity of the factors of production which are to be associated with each other in the enterprise, as well as how to fertilise, seed and cultivate in the best way, it is apparent that some method of keeping account of the results arising in connection with the various items is needed in order that a reckoning may be made. Farm accounting would consist of an itemised record of expenditures and income. The record of cost in producing a given crop would cover interest on investment in land, horses, and machinery, taxes, depreciation of machinery, value of seed and of labour, and cost of marketing. Besides this, a record of the kind of land the crops were produced on, of the quality of seed, time of seeding, kind of season, and methods of cultivation, form necessary data in determining the best method of organising and conducting the farm. Against the investment would be placed the income derived from the output at market prices. Some means of keeping trace of market conditions might prove valuable.

Several forms of accounting or book-keeping have been adapted to farming purposes. Single and double ledger, blank books, and cards are represented. The discussion of their relative merits is out of place in this work. The remark may be made, however, that the simpler the method the better. Complicated systems would not be useable for current purposes.

Another form of keeping records is what is termed " estate

accounting." It is largely used in England where large farms remain in the same hands for long periods of time. "This type is in the nature of a consecutive record, from owner to owner, accompanied by maps and plans of the subdivisions of the property, with an idea to permanency of results." It may belong to private parties or educational institutions. "The performance of the different fields or subdivisions may be determined through a long series of years." "This plan or kind of farm accounting relates the farm in a very positive way to the welfare of the community, and therefore affords a basis for social studies." [1]

Methods of Deriving Items of Information.— As illustrations of the manner in which the items entering into the records of production are derived, some instances will be given from investigations in Minnesota and Nebraska. The facts in themselves are interesting and valuable since they show the methods of deriving such information and the progress which is being made in that direction.

In 1902 the Minnesota Agricultural Experiment Station, in coöperation with the United States Department of Agriculture, located employés at stations in three of the most typical and important farming regions of that state. In each region eight to ten farmers were selected to act as "coöperators." The "route statistician," who was an employé of the Department, visited them daily and obtained data from the manager. Inventories were taken on each farm at the beginning and end of each year. Scales were used in making inventories of stock. Comparison was made on the acreage basis, for a considerable period of time, because it is subject to fewer variations than is the ton and bushel basis. The results obtained are presented in tables 6–11. Several tables are reproduced because they offer facts which are not generally accessible. It is believed that they will explain themselves.

[1] "Cyclopedia of American Agriculture," IV: 215–16.

TABLE 13[2]

AVERAGE COST OF FARM BOARD PER MONTH AND PER DAY, 1905–1906

	Month	Day
S. E. Minnesota	$12.27	$0.409
S. W. Minnesota	11.90	.396
N. W. Minnesota	11.06	.368

TABLE 14[2]

RATES PER HOUR FOR LABOR BY THE MONTH, 1904, 1905, 1906

Month	Cents
January	$0.1076
February	.1136
March	.0962
April	.1181
May	.1171
June	.1252
July	.1283
August	.1187
September	.1226
October	.1222
November	.1266
December	.1065

TABLE 15[2]

HOURS WORKED PER DAY BY MEN AND HORSES ON STATISTICAL ROUTE AT NORTHFIELD, MARSHALL, AND HALSTEAD, MINNESOTA

Average for three years, 1902, 1903, 1904

Month	Daily		Sunday
	Man	Horse	Man
January	6.57	1.20	4.22
February	6.48	1.22	4.16
March	7.59	1.41	4.03
April	9.67	4.47	3.71
May	8.69	4.04	3.10
June	9.22	3.49	2.82
July	9.23	3.33	2.72
August	9.79	4.81	2.66
September	10.11	4.18	2.79
October	9.67	4.35	2.79
November	8.94	3.11	3.43
December	7.17	1.38	4.33
Average	8.59	3.08	3.40

[2] "Cyclopedia of American Agriculture," IV: 232–9.

TABLE 16[8]

YEARLY COST OF KEEPING HORSE AND RATES PER HOUR OF HORSE LABOUR

Average for 1905 and 1906

	Total Cost	Rate per Hour
S. E. Minnesota	$80.14	$0.090
S. W. Minnesota	78.06	.082
N. W. Minnesota	72.93	.075

TABLE 17[8]

VALUES CONSUMED PER ACRE FOR FARM MACHINERY

(Made up from the several columns given)

Machines	Minn. Av.	Sabin (Clay Co.)	Large Farm in N. W. Minn.
Grain machinery			
Binders	.168		
Reapers			.061
Drills and seeders	.080		
Fanning mills	.028		
Grain tanks			.009
Wagons, sleds, and racks	.042		
Corn machinery			
Binders	.666		
Planters	.002		
Cultivators	.109		
Wagons, sleds, racks	.095		
Potato machinery			
Ploughs		.0520	
Harrows		.0140	
Wagons		.0580	
Sorters		.0142	
Diggers		.2470	
Weeders		.0307	
Cultivators		.0228	
Sprayers		.0700	
Planters		.0830	
All crop machinery			
Ploughs	.068		
Harrows	.014		
Disks	.061		

[8] "Cyclopedia of American Agriculture," IV: 232–9.

Machines	Minn. Av.	Sabin (Clay Co.)	Large Farm in N. W. Minn.
Threshing outfits			.288
Hay machinery			
Mowers	.213		
Rakes	.094		
Wagons, sleds, racks	.076		

TABLE 18[4]

FORAGE CROPS. COST OF PRODUCTION AND FEEDING VALUE

Crop	Cost of production per acre	Feeding value per ton	Average Yields: Per acre tons	Average Yields: Feeding value per acre	Maximum Yields: Yield per ton, acre	Maximum Yields: Feeding value per acre
Clover and timothy	$ 6.96	$6.35	2½	$15.87	3	$19.05
Fodder corn	12.19	4.90	3½	17.15	4	19.60
Ensilage	19.173	1.80	10	18.80	12	22.56
Mangels	34.12	1.30	20	26.00	30	39.00

The Agricultural College of Nebraska used a different method for collecting facts. The Department of Agronomy corresponded with a large number of farmers living in various portions of the state in the endeavour to find out the cost of producing crops under Nebraska conditions. Two of the eight tables in which the results are summarised are given because they represent such positive results relative to growing oats and wild hay.

TABLE 19[5]

COST OF GROWING OATS (PER ACRE)

Year	1909	1910	Average
Number of Replies	120	149	135
Interest and taxes (or rent)	$4.693	$5.164	$4.928
Ploughing	1.175	1.004	1.089
Harrowing	.272	.299	.285
Disking	.503	.612	.557
Seed	1.349	.908	1.128

[4] "Cyclopedia of American Agriculture," IV: 232–9.

[5] Bulletin of the Agr. Exp. Sta. of Nebraska, Vol. XXIII, Article VII.

Seeding	.448	.350	.399
Harvesting	1.949	1.932	1.940
Interest and depreciation on machinery	.490	.63	.586
Miscellaneous	.561	.379	.470
Total cost per acre	11.440	11.331	11.385
Yield per acre	34.6 bu.	35.5 bu.	35 bu.
Cost per bushel	33¢	31.9¢	32.5¢

TABLE 20[a]

COST OF GROWING HAY (1909) (PER ACRE)

	Wild Hay	Clover	Alfalfa
Number of Replies	104	75	114
Interest and taxes (or rent)	$3.925	$5.282	$5.196
Labour of cutting and stacking	2.586	3.010	4.878
Interest and depreciation on machinery	.211	.246	.256
Total cost per acre	6.722	8.538	10.33
Acreage yield	1.25 T.	2.04 T.	3.33 T.
Cost per ton	5.37	4.18	3.13

It is open to question whether farmers generally will adopt a systematic method of accounting and keeping record. The process involves much system and care, to which few agriculturists are adapted. It has been suggested by an eminent writer that the women of the farm are more fitted to do this work than the men. But they would have to be equipped by special training and with large comprehension to carry it out.

Perhaps the adoption by farmers of the standardised results which have been worked out by experts will be found to be more available. Such information, when placed in the hands of intelligent men, could be used as guides in the conduct of their operations.

Even a better alternative is developing. Voluntary associations of farmers and business men are coöperating in Illinois, North Dakota, and in other states, toward the employment of agricultural experts to work in the country in behalf of better farming. They travel from community to

[a] Bulletin of the Agr. Exp. Sta. of Nebraska, Vol. XXIII, Article VII.

community, and advise with and instruct farmers on their own farms relative to better methods of production. This movement may supply enough personal direction so that a large amount of accounting will be rendered unnecessary.

II. FARM MARKETING

It has been amply shown that the farmer may increase his productiveness in the field, and that it would be beneficial to him if he should keep a record of his business in its details. The regulation of conditions in society at large, on which his prosperity greatly depends, now requires our attention.

The farmer might approach Nature in a passive attitude, fatalistically accepting what she gives up, never seeking to coerce her into yielding more. He may also regard his relation to the business organisation of the world in much the same manner. In fact the agriculturists have taken this attitude too extensively. They have seemed to think they could, by no possibility, influence the regulation of the conditions which set their prices and profits, and have permitted themselves to be victims of whatever chicanery and extortion unscrupulous and selfish commercialism has practised. We shall first seek to discover some of the difficulties the farmer meets when he undertakes to market his produce advantageously.

Complexity of Conditions.—"If the farmer has to sow and reap wheat, rear and fatten oxen and sheep, and attend to all the minor branches of his trade that are recommended in the text-books as sources of profit, he must have a corresponding number of articles to sell. He has this additional difficulty, that he has to sell them by different methods and to different people. He has to know not only at what price such articles as he has to offer are selling at any given market, but he has to know whether it will pay him to sell them at that price. He has to exercise his judgment as to whether prices are likely to rise or fall, and to use his ingenuity in finding

out whether by going further afield he can get a better offer, and whether the cost of taking his produce to that market will not extinguish the advantages he might hope to gain. Then it is to be remembered that he is dealing with men who confine themselves to one branch of his industry; for the butcher does not buy wheat, or the miller beef, and consequently he is dealing with men who may be expected to know the details of the trade better than he does. Add to these that he is face to face with a fierce foreign competition, and the sum of his difficulties as a trader will be found to equal, if not surpass, the sum of his difficulties as a producer." [7]

Besides these difficulties of marketing his produce advantageously, the farmer is subject to other conditions external to him and over which singlehanded he has little control. These consist in the transportation systems which control the rates on produce and consumption goods, and the exchange system consisting of a great mass of middlemen. Neither of these is the peculiar problem confronting farmers as a class, but in some respects he seems more victimised by the middlemen system than some other producers.

Transportation is in nature a monopoly where a shipping point possesses but one line. It is, in fact, a monopoly in many cases where a shipping point is pierced by two or more lines. In such instances an understanding exists between the transportation agencies, and identical rates are maintained by them. The shipper is liable to be the victim of extortionate practices, and the farmer pays double, on his produce and on the goods he buys. Without organisation he has little chance of redress. Only by organisation can he succeed in obtaining more equitable conditions. The various state railway commissions have been able to assist the shippers to a limited extent. The United States Interstate Commission is a much more effective assistant, especially if agri-

[7] Arthur A. L. Rogers, "Business Side of Agriculture," pp. 10–11. Methuen & Co., London, 1904.

culturists arm themselves with sufficient political power to make their influence felt in the direction of the appointment of its members.

Besides the evils of the transportation system are those of the middleman system. This is even more pernicious than the former. It is of recent origin in its complicated form. In a simpler condition of things direct exchange of produce for consumptive goods took place. To-day we have various sets of middlemen. One set is known as distributing agents in the field. These agents act for associations of either buyers or sellers in such great distributing centres as Kansas City and St. Louis, and have large directive powers over shipments. Should there be a congestion of a certain form of produce at a given place they may direct goods destined for that place to another point in which a scarcity exists.

Another set are the regular commission merchants who receive goods to sell on a commission, and who also, in some instances, may divert goods from one point to another. Then there are the jobbers, of whom we commonly think as wholesalers, whose business it is to receive goods from importers or from manufacturers and to sell them to retail merchants. At the bottom of the middleman pyramid exists the retail merchant, from whom the great mass of persons, including the farmer, purchase their supplies.

The causes of the establishment of these various kinds of middlemen consist in the larger markets which have come by reason of the new system of transportation and communication. Barter has been supplanted, localism in exchange is of small moment, and in order that goods may reach distant points where they are consumed specialised agents are needed.

One of the results affecting the farmer, by reason of this system, is the loss of association on market days which he previously enjoyed with other farmers and buyers. This is especially true where the middleman buys directly from the farm. Another is the loss which arises through masterful

competition between middleman firms and which the consumer sustains in the price he pays for his goods. This arises by duplication of costly establishments, the payment of duplicate forces of employés who are idle most of the week because trade congests on certain days, costly advertising, duplicate field salesmen, duplicate delivery systems, and so forth. Fewer establishments could do the business which is carried on in the average village and city at a great saving.

Still another evil, which is now becoming portentous, is the combination to control prices which the various grades of middlemen practice. In the higher grades it tends to become oppressively monopolistic. The combination may exist only as the "gentlemen's agreement," or as the "neighbourly kindness" of the steel businesses. It is sufficiently effective in either case. In retail business there are state and city associations of the various lines of middlemen.

In some respects the latter form of combination is the worst of all. It is scattered, general, made up of a considerable portion of the population, and is somewhat intangible and dangerous for purposes of legislative and legal reform. As it succeeds in raising prices to successively higher levels each merchant can live off of a smaller volume of business. In turn more merchants creep into the business to carry on the same volume of business which was done by fewer concerns previously. The farmers and other consumers carry the increased burden.

The Department of Agriculture investigated marketing conditions in 1910 to discover how much the farmer gets of the retail price. This investigation covered 78 cities and included milk and butter. The report says "that the milk consumers of 78 cities paid for milk an increase of 100.8 per cent. above the price received by dairymen; in other words the farmer's price was fully doubled. The lowest increase among the geographic divisions was 75.5 per cent. in the South Atlantic States and the highest was 111.9 per cent. in

the Western states." [8] Consumers pay about 15 per cent. more than the factory price for butter.

Facts are cited from the report of the Industrial Commission relative to many articles. Although they were obtained about ten years ago it is thought that the situation has not materially changed in that interval. Some very large percentages of increase were found—"135.3 per cent. for cabbage bought in the head; 100 per cent. for melons bought by the pound, for buttermilk sold by the quart, and for oranges sold by the crate; 260 per cent. for onions bought by the peck; 400.4 per cent. for oranges bought by the dozen; 111.1 per cent. for strawberries bought by the quart; and 200 per cent. for watermelons sold singly." Many articles sold to consumers at from 75 to 100 per cent. above the farmer's price.

The middleman does not absorb all in excess of the farmer's selling price. Transportation secures its charges. "The freight charge for milk received in New York is about 18 per cent. of the producer's price and in Chicago about 14.7 per cent. . . . The percentages of farm price for which freight charges stand in the United States may be estimated at approximately 0.9 of 1 per cent. of the factory price for butter; 1.2 per cent. of the farm price for clover seed; 1.6 per cent. for cotton; 1.3 per cent. for eggs; 13.6 per cent. for apples; 4.8 per cent. for beans; 14.8 per cent. for potatoes; and 5 per cent. for sweet potatoes. The rates for oats, rye, barley, and wheat are nearly the same, ranging from 6 per cent. for oats to 7.3 per cent. for barley and rye. The rate for corn is 9.2 per cent. and the average for all grain is 7.7 per cent. For hay the percentage is 15.8 per cent.; for cattle and hogs, 2.5 per cent.; for live poultry, 4.5 per cent.; and for wool, 0.6 of 1 per cent." [9]

Professor Carver, in his volume on rural economics, gives the following facts relative to the distribution of the ultimate

[8] "Year Book," U. S. Dept. Agr., 1910, p. 24.
[9] *Ibid.*, p. 25.

cost of certain articles among the various agents in their production. Only a few articles are selected to illustrate the point. (Table 14.)

TABLE 21

DISTRIBUTION OF PROFITS ON AGRICULTURAL COMMODITIES

Product	Price to producer	Price to consumer	Difference	What wholesaler gets	What retailer gets	Place sold
Apples, Jonathan..	$1.66	$3.60	$1.94	$0.12	$1.10	Boston
Bacon, home cured.	.08	.19½	.11½	.048	.03½	"
Beef, per 100 lbs, steer	4.25	6.475	3.79	2.85	0.4885	"
Butter	.25	.36	.11		.072	"
Eggs	.12	.25	.13		.0685	"
Milk	.02¾	.08	.05¼	contractor .02¾	peddler .02	"
California oranges..	1.612	3.50	1.888		.05	"
Potatoes	.50	.90	.40		.17	"
Rice	.40	4.16⅔	3.76⅔	1.00	2.00	"
Dressed turkey....	.25	.38	.13	big dealer .015	.08	"

III. BENEFITS OF ORGANISATION

A different line of action has sometimes been proposed as an alternative to organisation on the part of farmers. They are asked to become self-sufficient. The farmer is to attain this by becoming the consumer of his own products. He thus rids himself of dependency on corporations.

This is rather an absurd proposal. It would not relieve the farmer of buying his groceries, drygoods, machinery, and other supplies which corporations control, unless, at the same time, he resorted to the extreme measure of becoming manufacturer of these various commodities as they exist in their present form. Otherwise he would have to return to the

stage of household manufacture, and to a state of living which would be so primitive that few modern men and women would be willing to adopt it.

Value of Coöperation.— The farmer's panacea undoubtedly lies in the direction of organisation, in a coöperative effort of some form, rather than in a resort to an extreme individualism. If the farmer were not certain on this point he has lessons both in the industrial and commercial world, as well as in that of agriculture at home and abroad. In the case of industry, commerce, and transportation, independent competitive dealers and corporations existed during a considerable era. Rivalry and competition between them were lively and even destructive at times. Loss and demoralisation frequently occurred.

Out of this internecine strife there gradually emerged understanding and coöperation among rival dealers and corporations. Combination took the place of independent competition. Larger profits came instead of destructive losses. Peace and stability have been accompanying effects.

Between small organisations of agricultural producers is also seen the destructive and demoralising effects of competition. For instance, in the Michigan grape-producing region exist several local associations of grape growers for marketing their produce. They operate on an approximate coöperative basis. But the local associations compete with each other in dealing with commission houses for the disposal of their fruit. This tends to lower the price of their grapes, to induce jobbers to stimulate the inter-associational rivalry, and weakens the organisations, which are otherwise quite effective.

The local associations have seen their weakness. Local pride and jealousy have prevented their amalgamation into a larger coöperative undertaking. Recently, however, meetings have been held and steps taken to effect such an object. The conditions are promising for a more comprehensive organisation among the grape growers of Michigan.

Requirements of Organisation.— Theoretically, the nature of the organisation the farmers should establish is in question. Should it be modelled on industrial combinations or strike out on original lines? It is true that rural regions cannot expect to move as fast as urban communities in adopting inventions and utilities for business and comfort. They may not be able to adopt in the exact form the things they do take over for use. In their combinations for business purposes they may have to work over and modify organisations to make them meet their purposes.

The principles which lie at the foundation of industrial organisations are applicable to those of agriculture. One of these is the practice of economy in the internal arrangement and processes which arise out of competitive conditions. The elimination of waste and duplication and the circulation of intelligence which makes this possible are means to realise the principle. A second principle is seen in the strengthening of the trade against outside interests. Thus middlemen combine against producers of their stock to lower the cost of goods, and against consumers of the articles they sell to raise prices, leaving the trade a larger profit. A third principle may be observed in the attempt of the trade to control party and governmental activities in the direction of benefiting its own interests. Some of the larger corporations have influenced legislators in the selection of senators in Congress; caucuses and conventions who nominated the legislators who should prove approachable; the appointment of judges who should decide their cases in court; departmental appointments and administration in the government at Washington; and Congress of the United States in its legislative activities.

There is a further requirement which is imposed on agricultural organisations, if the farmers would become independent economically as a class. This is the one which arises out of the food demands of the world made by the populations of the great cities. To meet the necessities of this situation

food must be transported rapidly, for the oranges of California, for example, are most consumed over 2,500 miles outside the state. It must be sent regularly for the demand is constant. It must be of such uniform quality that a sample will represent the supply at large. Individual farmers are not fitted to meet these demands. Local organisations are not competent. Only wider combinations, such as are seen among the orange-growers of California and the Pacific Coast, would be able to fulfil the conditions.

This standardisation of products is particularly pertinent in fruit growing communities. As practised on the Pacific Coast it consists of grading and classifying the product. It extends to the field and the orchard because it is necessary to grow and to pick fruit in such a way that it will be able to stand the test of competition, to yield the desired quality, and to sustain the least damage in shipment. A fruit growers' organisation in the Pacific Northwest employs a pathologist to advise them concerning the handling of their crops.

A further step in standardisation will consist of registration of the product. New Zealand has a registration law covering exported products. Each article to be exported is tagged with the name of the producer and he is held responsible for its quality. This guarantee of the quality of products is of direct commercial advantage to producers as it insures a market for their wares.

Another requirement of American agricultural marketing is the creation of a system of marketing news. A plan prepared by the American Society of Equity consists of organising a system of reporting farm products from all individual farmers to local centres, from there in turn to state centres, and from there again to a national centre or bureau. Thus the central bureau is informed constantly as to the kinds and amount of all farm products in the whole nation. On the other side the central bureau gathers from all sections of the nation information of the prices at which agricul-

tural products sell and the quantities demanded. This information is handed down to local communities and individual producers. It is able to direct local centres where to ship their produce to secure the best returns. Thus the producers and consumers would be brought into closer relations with each other. It is proposed that Congress shall provide for the establishment of such an organisation as a government undertaking.[10]

Object Lessons in Improved Farm Marketing.— Object lessons sufficient exist to indicate the sort of combination agriculturists require. The growth of the coöperative movement during the last few decades among the farmers of the world, covering not only the marketing of their products, but undertaking the even more difficult task of selling supplies of all sorts to themselves, furnishes significant examples.

Abroad, Denmark affords the most striking illustration of the benefits of coöperative undertakings among rural populations. It may be said that agricultural Denmark has been redeemed by the movement. All its chief products are handled by coöperative associations, such as dairy products, eggs, and bacon. Relative to bacon, the federated slaughtering associations are so strong that they established a competitor in London to meet the competition of a bacon trust and eventually destroyed the latter.

The importance of the factor of coöperation is well brought out in the report of the Scottish agricultural commission in 1904. They observe: "It may be said that the dominant feature of Danish agriculture is the thoroughness of its organisation. From the local associations supplying the farmer with his requirements and purchasing the produce of the land, to the great trading corporation having their headquarters in Copenhagen, a network of coöperative societies, all federated together, covers the whole agricultural work. As the middleman is largely dispensed with, and most of the local buying

[10] "Central Agency to Market Foods," A. M. Evans, Chicago *Record-Herald*, Nov. 28, 1913.

and selling is done practically for ready money, a great deal of additional profit is secured to the producer which in other countries is lost. By the separation of the commercial from the productive side of agriculture a most useful division of labour is secured. The trading is carried out wholesale by especially skilled men who are fully occupied, so that the individual farmer is free to devote his whole time and energy to getting as much as possible from the land."

The movement has enlightened the farmer as to what education should be. Farming there is fast becoming a science, and to equip the youth for their occupation the schools have been made responsive to the needs of farm communities. This breeds general intelligence and a comprehension of the principles of science. It has also enlightened the farmer as to what are his rights and privileges as a class among other classes.

In order to secure justice the farmer has entered the political arena. Having the majority of voters he has filled the popular house of the national legislature with members representative of his interests. They have proceeded to create land laws which are gradually breaking up the large feudal estates and making it possible for the poor man to obtain small holdings. Administrative officers in the ministry or cabinet are also of agrarian extraction. The prosperity of Denmark under the effects of the coöperative movement is beyond anything it has ever seen before. Marketing its products and buying goods for its members at most advantageous terms, it has accomplished for the mass of the population what, in America, the great corporations have accomplished for the few.

In America the coöperative movement is rapidly extending among the farmers and is bringing undoubted advantages to them. One of the most notable is the California Fruit Growers' Exchange, which handles from 60 to 70 per cent. of the citrous fruit grown in the state and does a business ranging

from $20,000,000 to $25,000,000 a year. It has over 100 packing houses, 13 district and 96 local exchanges, and about 6,000 members.

Farmers' Grain Dealers' Associations are becoming important economic agencies. These associations have done much to elevate the price of grain. They own multitudes of local elevators and are moving toward securing terminal elevators. They also desire uniform Federal inspection of grain. The local associations have become large distributors of staple commodities in their communities. There is a marked tendency in the movement to become more coöperative in the technical sense, demanding stricter fealty of members and giving them advantages not possessed by outside patrons.

What coöperative farmers' grain dealers' associations may accomplish is seen in the case of such an organisation in Illinois. In 1902 the Illinois Grain Dealers' Association, an organisation of grain buyers, undertook to destroy twenty-five Illinois farmer grain companies, by getting terminal-point grain receivers to refuse to receive their grain. As a result the Farmers' Grain Dealers' Association of Illinois was formed. Since it was formed in 1903 about 300 coöperative grain companies have been established, with new ones being formed at the rate of 20 to 30 a year. Illinois raises about 500,000,000 bushels of grain annually and sells about 300,000,000 bushels. It is conservatively estimated that the organisation has raised the price of grain 3 cents a bushel, thus making the farmers of Illinois $9,000,000 a year. Besides, the coöperative societies handle and sell to members commodities of various sorts. By this means the price of coal has been reduced 50 cents to $1.00 per ton and that of lumber $2 to $10 per thousand. Further, the advance in the price of grain means that at least $5 is added to the value of every acre of land where these conditions exist. Thus the estimate of the annual saving to the farmer be-

cause of all these gains varies from $25,000,000 to $50,000,000.

What has been accomplished in Illinois by this organisation has been done in a somewhat similar manner in Iowa, Missouri, Kansas, and many other states of the Mississippi Valley region.[11]

This tendency to become more strictly coöperative is in line with the advice of Sir Horace Plunkett. He says the emphasis in farmers' organisations must be laid on equitable distribution of profits, risks, and control, and this admonition comes out of his twenty years of experience in organising agricultural societies in Ireland.

Facts relative to the constitution and character of agricultural organisations in the United States will be given in a later chapter. The reader is referred to that portion of the volume for fuller particulars.

REFERENCES

Rural Manhood, January, 1911, "Progress of Agricultural Coöperators."

Bailey. "The State and the Farmer," pp. 114–116; 118–122.

"Report of the Secretary of Agriculture of the United States," 1910, pp. 79–81.

Kirby, P. M. "The Middleman in Practice," pp. 239–41.

"Cyclopedia of American Agriculture," Vol. IV: 215–16.

Fetter, F. A. "Theory of the Middleman," same, 232–9.

Bulletin of the Agricultural Experiment Station of Nebraska, Vol. XXIII, Article VII.

Rogers, Arthur A. L. "Business Side of Agriculture," pp. 10–11. Methuen & Co., London, 1904.

Chicago *Record-Herald*, articles by W. E. Curtis, December 8, 1909.

Harwood. "The New Earth," Chap. 15.

Report of the Country Life Commission, pp. 33–4; 53–6.

Plunkett, Sir Horace. "Rural Problem of the United States," Chap. 5.

Rysgaard, J. M., Fellow in University of Chicago. "Coöperation in Denmark." Paper read before the Fortnightly Club, Grand Forks, N. D., published in Grand Forks *Herald*, March 18, 1910.

[11] "Save $25,000,000 by Coöperation Among Farmers," A. M. Evans in Chicago *Record-Herald*, Dec. 5, 1913.

Coulter, John Lee. "Co-operation Among Farmers," Sturgis & Walton Co., N. Y. 1914.

Howe, F. C. "A Commonwealth Ruled by Farms." *Outlook*, February 26, 1910, p. 441.

Payne, Will. "Coöperation the Small Man's Salvation." *Saturday Evening Post*, February 19, 1910 and March 12, 1910.

Chicago *Record-Herald*, May 5, 1911. "Orange Farmers Save Fortunes by Coöperation," W. E. Curtis.

Everitt, J. A., Founder of the Society of Equity of North America, Indianapolis. "The Third Power."

"Constitution and By-Laws of the American Society of Equity of North America," Indianapolis.

"The American Society of Equity, Sixty-five Important Questions Answered," Indianapolis.

"The American Society of Equity,—a few pointers about the plans of the grain growers in district No. 1. American Society of Equity," Chas. N. Pierson.

McVey, Frank L. "Railway Transportation," Pt. I, Chap. 3.

Carver, T. N. "Principles of Rural Economics," p. 330.

U. S. Report on Agricultural Coöperation and Rural Credit in Europe.

E. K. Eyerly. "Coöperative Movements Among Farmers," Annals Amer. Acad., Vol. 40.

A. E. Cance. "The Farmers' Coöperative Exchange," Amherst, Mass., 1914.

Holman, Chas. W. "The Business Side of Fruit Distribution," Advanced sheets, Second National Conference on Marketing and Farm Credits.

CHAPTER X

IMPROVEMENT OF THE BUSINESS SIDE OF FARMING — CONTINUED; — RURAL CREDIT

Within a few years the subject of rural credit has assumed much importance in the United States. National conferences give it extended consideration and it is likely that Congress will legislate on it in the near future. For these reasons and because the matter is important in the economy of rural life some attention should be devoted to it.

Need of a Rural Credit System.— Because farming is assuming an industrial aspect the world over and must meet the demands of industrial systems it should have the facilities for obtaining credit that are extended to other forms of industry. Certainly it would not be worth while to plead for a credit system on any other basis than that of giving equal justice to the farming class. The advantages of a rural credit system appear as follows:

First, affording the farmer a more available and often a more reasonable credit. Not all farmers and not all regions are in sore need of improved credit, nor are farmers in a poorer situation than most urban land owners in the matter of securing credit. The investigation of the Department of Agriculture on rural credit among 9,000 farmers of this country indicates that "77 per cent. of the farmers owning their land are able to give good security or indorsed note for a loan, the corresponding percentage of tenants being 46. About 48 per cent. of the correspondents reported that farm owners having the ability to give good security or indorsed note are able to obtain short-time loans. The other correspondents re-

ported that 30 per cent. of farm owners in their communities are unable to do so because of insufficient opportunities to borrow. Reports from 47 per cent. of the correspondents show that such farm owners are able to secure long-time loans, while the remaining correspondents reported that 40 per cent. of the farm owners were unable to do so. The corresponding percentages for tenants are about the same." Seven per cent. of cotton growing farm owners place no lien on their crops, 42 per cent. do so, and 52 per cent. did so ten years ago. For tenants the percentages are 2, 74, and 77. Local banks supply over half of rural credit, and the stores supply a large part of the remainder. The rate of interest paid ranges from 6 to 8 per cent.[1]

Newer and frontier districts are at a greater disadvantage relative to securing credit than older and well-settled districts because local capital is scarce and the security of the borrower is small or uninviting. Thus Dane County, Wisconsin, is well settled and well established, while Rush County is situated in the undeveloped northern part of the state. Interest rates are from 5 to 6 per cent. in the former, from 6 to 10 per cent. in the latter. Yet in Rush County money is needed to pay for land, build houses, buy cows, and often to live. In that county commissions are 2 per cent., as they also often are farther West. That is, the agent withholds 2 per cent. and sometimes 4 per cent. of the 8 per cent. or 10 per cent. rate of interest paid, remitting the remainder to the outside loan company. He may get as much as $1,000 for his commission on a $5,000 loan, whereas the service of merely passing the papers through his office is worth not more than from $10 to $25.[2]

Investigations made in North Dakota are of similar import.

[1] G. K. Holmes, "Rural Credit," *Business America*, 13 (1913), No. 2, pp. 121–127.

[2] D. M. Frederickson, "Second National Conference on Marketing and Rural Credits," Confidential advance sheets.

Reports from banks indicate long-time interest rates are 7.88 per cent. for the whole state; from farmers, 7.91 per cent. Interest is lowest in the eastern part of the state, which is older and richer, highest in the west third, which is frontier, and fairly between the two rates in the central portion. Nowhere is the rate less than 6 per cent. Payment of interest in advance on an 8 per cent. basis makes the interest rate 8.7 per cent. Short-time loans are secured chiefly from local banks, the average time being 8½ months, the average interest, 10.75 per cent. An unsecured note is usually given, although frequently a chattel mortgage is required. Of 125 banks 95 reported that the rate to farmers is generally higher than to merchants, being 10.75 per cent. for the former, 9.18 per cent. for the latter. Eighty-seven per cent. of the farmers purchase farm machinery on time, a note bearing 10 per cent. usually being given which generally really bears interest only after a failure to pay the principal when the crops are sold.[3]

Second, it is probable that an effective system of rural credit would encourage farmers to become landowners. This is an important consideration because it bears on the question of whether or not we want our nation to become one of tenants or of landowners. The general subject of tenancy receives treatment in a subsequent chapter. But the growth of tenancy may be denoted here. Tenant farms in the whole United States increased from 25.6 per cent. in 1880 to 37 per cent. in 1910. In the most important farming sections of the nation tenancy has increased since 1900 1.8 per cent. in the East North Central division, 9.0 in the West North Central, 19.9 in the South Atlantic, 21.6 in the East South Central, 34.3 in the West South Central.[4]

There are indications that low interest rates encourage farm ownership. Thus Wisconsin has a short-time interest rate

[3] Meyer Jacobstein, "Farm Credits in a Northwestern State," *American Economic Review*, Sept., 1913, pp. 597–605.

[4] Abstract Thirteenth Census, p. 287.

of 6.25 per cent., or 1 per cent. lower than has Iowa, 0.7 per cent. below that of Minnesota, 0.6⅔ per cent. below Michigan's, and slightly lower than the rate of Illinois. Concomitantly there occur low tenancy and increasing mortgages in Wisconsin, high tenancy and decreasing mortgages in Iowa, high tenancy, low and slightly increasing mortgages in Illinois. "The inference is that mortgages are being used in Wisconsin as a step toward farm ownership to a greater degree than in the states in the heart of the corn belt, where land values are much higher." [5]

Third, rural credit of a favourable nature promotes farm improvement. Better machinery, improved stock, the beginnings of stocking and dairying, and changing the form of tillage are often dependent upon procuring additional capital at reasonable rates of interest. In some of our states the bankers of a community see the importance of promoting farm improvement and consequently organise for the purpose of guaranteeing the security on loans to farmers for the purchase of cows. But as has been seen, the interest is likely to be higher than the farmers should pay.

In Bavaria credit arrangements have increased land cultivation by making it easier for small farmers to secure personal and real credit. The credit societies "enable farmers to secure more readily and cheaply than formerly articles necessary for agriculture, such as seeds, artificial fertilisers, and agricultural machinery and implements of every kind." [6]

Desirable Principles.— There are certain governing principles which are desirable and necessary in a rural credit system. They are more or less common to both long-time and short-time credit, and are to be observed in the systems which have been worked out in European states. 1. A rea-

[5] B. H. Hibbard, Sec. Nat. Conf. on Marketing and Rural Credits, Advanced sheets.

[6] "Agricultural Co-operation and Land Credit in Europe," U. S. Dep. Agr., p. 267.

sonable rate of interest. This means an equitable rate as compared with that which industrial and commercial operators pay. 2. Accessible credit, or ample facility for securing credit when needed. It has been observed that this is not always possible in this country. Nor has it always been possible in European countries. 3. Provision for extending the time of credit in case the farmer is unable to meet the loan when it becomes due. Multitudes of farmers have lost their land because of foreclosure of their mortgages. 4. A plan by which gradual amortisation shall take place during the life of a long-time loan. According to European experience but a small addition to the interest is required to provide for eliminating the principal on a tenure of 50 to 70 years. 5. A larger loan value than is commonly accorded. This is especially needed in the case of ambitious men of small capital who desire to undertake the purchase of farms. When land values become great it becomes practically impossible for small capitalists to obtain land. 6. Systematic care in fixing land values on which loans are made, and certainty of land titles. These are necessary provisions for the protection of the mortgage or bond holders, and to render such papers available for commercial purposes. The latter is a very desirable element in giving rural credit that solidity which will make it a desirable field of investment.

Europe has been a vast social laboratory in which valuable experiments have been tried in many directions. One of these has been that of providing a better system of rural credit than was previously available. For a long time statesmen have been disturbed by the urbanising tendencies and have sought to keep men on the land. Agricultural credit systems are devices partially intended to accomplish this end. It is fortunate for the United States that at the time it is seriously considering this subject it has access to the experiences of the European states which directly bear upon it. An account as brief as possible of some of those systems will

doubtless prove more useful than a system theoretically projected.

German Credit Systems.— Prussia has been very successful in building up and operating systems of agricultural credit. Its more notable contributions are the Landschaften, which are long-time credit associations, and the Raiffensen associations, these being short-time or personal credit societies.

The Landschaft system has as its fundamental idea the replacing the mortgage system in which the creditor and debtor meet face to face by a credit system in which credit-seeking property and investment-seeking capital are alike convenienced. Agriculturists of a political district organise into a landschaft. Initial membership charges are small, just enough to cover running expenses. A member desiring to obtain a loan gives a mortgage to the society on his land for a maximum of 66 per cent. of its value. The interest rate is 4 per cent, ½ per cent. of which is for running expenses, but chiefly for amortisation. The loan is made for 50 years, the interest eliminating it at the end of that time. The association gives the mortgagor a bond of the value of the mortgage. This bond is sold through the landschaft banking department organised in connection with the association for such purposes. Since the valuation of the land is made by an impartial board, the land title is beyond dispute, and the system operates under state laws and under officials and commissioners appointed by the king, the bonds stand next to government bonds in security and commercial value. Widows and orphans are allowed by law to invest only in government and landschaft bonds. The business of the individual landschaften is inspected and accounts audited monthly by law officers. By virtue of the incorporation of landschaften the individual members are subject to unlimited responsibility for the business of their individual landschaft. Besides this security bondholders are secured by the mortgage on which the bond is issued, by whatever property

the landschaft possesses, and by the sinking fund out of which amortisation is paid.

Up to 1911–12 mortgages had been issued to the amount of 3,000,000,000 marks, bonds being issued to the same amount. Two-thirds of the amount bore 3½ per cent. interest, one-sixth 4 per cent., and about the same amount 3 per cent. There was an accumulated sinking fund of 192,000,000 marks, a guaranty and reserve fund of 50,000,000, and an accrued capital of about 50,000,000 marks.

Seven district landschaft banks carry on the business of selling the bonds of the local associations. Besides this they do a general banking business, with the exception of engaging in purely speculative transactions.[7]

Germany has developed short-time credit systems, such as the Schulze-Delitzsch, and the Raiffensen associations. Although these have been noticed often, the latter at least deserves attention in this connection.

The Raiffensen system has as its object the organisation of the rural population as local credit, or "thrift and credit" societies, and the organisation of the local associations into a collective body, The Agricultural Central Loan Bank of Germany. The local societies are built on the following principles: 1. The unlimited liability of all members of any local society for its debts. 2. Mutual improvement, both moral and material. 3. Membership in but one society, this society to be as narrowly local as is consistent with self-support. 4. No entrance fees, and no granting of shares, save where legally compulsory and then shares to be small. In case of any dividends on shares they shall not exceed the interest charged on loans made by the association. 5. No salaried officers, save the accountant or cashier. 6. All profits must go to an indivisible common fund belonging to the society. 7. Loans are made to members only on sufficient per-

[7] U. S. Report, "Agricultural Co-operation and Rural Credit in Europe," 1913, pp. 267–460, especially 377 ff.

sonal security, for a fixed time and fixed interest, although loans may be repaid at any time. All loans must have a legitimate purpose. In certain contingencies societies have the right to call in loans.

The Central Bank has as its objects (1) "to carry on banking and credit business, more particularly as a means of equalising temporary shortness or oversupply of cash in local banks" or societies. (2) "To provide for collective purchases of agricultural requirements, as well as for the collective sale of agricultural produce." The latter business has been transferred to seven distinct district organisations. The capital of the bank is 10,000,000 marks, made up of shares of 1,000 marks each. These are made out to individual holders and hence are not sold in the market, although they may be transferred on approval of the committee of inspection. Shares may be owned only by members of the managing committee or the council of inspection, or by local societies which fully subscribe to Raiffensen principles. Dividends on shares must not exceed 4 per cent. Funds are secured by several means, such as shares, deposits, loans, commissions charged on business, profits on goods dealt in, and issues of debentures for indefinite periods. Twelve branch offices distributed through the Empire carry on the business with the local societies. The limit of credit of local societies is fixed by (a) the amount of the property tax assessed on members, and (b) where such property tax does not exist, by estimates made by the managing committee of the bank. The maximum limit where the property tax list is available is 10 per cent. of property. Elsewhere it is 5 per cent. of the value as determined by the committee. New lists are required annually. Insufficient funds collected by the branch offices are supplemented by the central bank, and their surplus funds are sent to it. Weekly reports of their transactions and a monthly statement of all their business are made to the bank.

Thus there is provided a short-time credit system not only

for rural purposes but for the inhabitants of cities as well. Relative to the Agricultural Central Bank, A. Buchrucker, general secretary of the general union of the rural coöperative societies of Germany, says: "In this manner the Agricultural Central Bank of Germany has, in spite of its formation as a joint-stock company, been enabled to maintain its genuinely coöperative character, transacting business in its wider sphere practically on the same coöperative lines as the local credit societies do on a smaller scale." Its character facilitates business with the money market and provides a capital that is steadier than that of local societies which are subject to changing conditions.

Raiffensen societies were introduced in Austria a long time ago and have experienced a large expansion. In 1913 there were 8,000 societies; in 1910, 7,197 with a membership of 944,526. They have been uniformly successful and all classes coöperate in promoting them. The cost of management is very low. In 1907 and 1908 it averaged 494 and 486 crowns, respectively, per society, or 3 crowns, 49 hellers; and 3 crowns, 41 hellers, per member. As elsewhere central organisations have been formed and racial elements join harmoniously in rendering each other mutual assistance.[8]

French Credit Systems.— The French government has sought to root its credit system in the rural population. By the laws of 1894 and 1899 short-time agricultural credit was provided. Supplementary legislation has provided long-time mortgage credit. The system begins with local units and organises upward through larger centres and departments rather than with a central bank and organising downward. M. Albert Viger says: "Under the French system we, therefore, have the credit syndicates, and out of these the departmental banks usually located in the provincial towns, and finally the central federation of credit." The French claim is that it is a democratic system.

[8] Same, pp. 209–214, and 302–399.

The short-time rural credit system consists of a central bank, the Bank of France, 100 regional banks, and 4,000 local banks. Under the former banking system private banks charged 8 per cent. interest and 10 per cent. for average yearly discount. These are the rates now for such banks. This led the French government to subsidise banks organised for discounting farmers' bills. Hence regional agricultural banks were provided. The Bank of France was rechartered in 1896 on condition that it advance the government 40,000,000 francs a year free of interest for subsidising the rural banks, together with not less than 2,000,000 francs yearly to assist agricultural credit. These funds are distributed to the regional banks by a commission of senators, representatives of local banks, directors of the Bank of France, and other persons, acting with the department of agriculture. Besides distributing money to the local banks, the regional banks discount bills of local banks, which is necessary because by French law the Bank of France can only discount bills indorsed by three signatures. Indorsed by the farmer, the local bank, and the regional bank, the farmer's bill may be discounted at the great financial institutions and the Bank of France.

Short-time agricultural credit is carried on with the local banks and is strictly personal. The indorsement of some one of known responsibility only is required. It is distributed through local associations, and is cheap, the interest varying from 3 to 5 per cent. The local banks, because close to the people, guarantee security and pass on loans, which are almost always paid. The regional banks distribute government funds to local banks. These funds amounted to 60,000,000 francs in 1912 derived from the state, and 25,000,000 francs derived from their net capital, reserve, and deposits. Regional banks have accumulated a reserve fund of 5,000,000 francs and operate at a yearly cost of 500,000 francs, a proof of their economy. The 4,000 local banks

have 200,000 members, and a subscribed capital of over 18,000,000 francs. In 1911 they loaned 82,000,000 francs, besides the 52,000,000 outstanding. During the year they were repaid 72,000,000 francs by farmers. One thousand local banks have adopted the principle of unlimited liability, the other 3,000 operating on that of limited liability.

Long-time credit in France is of two kinds; — collective and individual The law of 1906 authorised the regional banks to make collective long-time loans to coöperative associations organised for the purpose of purchase, production, and distribution. The principles underlying this law are the same as those in the previous laws, namely, the government stimulates independent initiative, but does not replace it. Certain conditions must be complied with on the part of the associations. 1. Credit is granted them only for "production, conservation, or marketing of products actually produced by the associates of the coöperative associations which are to enjoy the credit; or to associations for carrying out agricultural work, whose members are actually engaged in agricultural work." 2. Interest on this form of credit cannot exceed 4 per cent. Dividends are distributed only to members according to their contributions to societies for productive purposes, not on capital. 3. The amount of credit granted to these societies is fixed at one-third of the sum paid by the Bank of France to regional banks for agricultural purposes. This is the chief source of this form of credit. 4. The commissions which control the grants to regional banks also authorise this credit. After application is made by an association to the ministry of agriculture, a technical inquiry into the need of credit is conducted, and if satisfactory, the commission may grant credit on the condition that the association give a mortgage on its entire properties and secure it on the unlimited liability of all its members. "In order to reduce the burdens which are believed to be heavier on agriculture than other industries, and

in order to fight rural depopulation and further the social interests of the nation," the interest on these loans is placed at from 1½ to 2 per cent.

The French nation passed a law in 1910 which provides for long-time individual credit, "the latest stone in the structure of agricultural credit." This form of credit is provided by the Bank of France to local banks by way of the regional banks. The maximum loan obtainable is 8,000 francs, and the maximum time of a loan is fifteen years. Loans are made only to small farmers "to attach the small peasant farmer to the soil." The chief objects of this credit are to assist small farmers to acquire holdings; to encourage young men who have finished military service to take up farms; to enable owners to transform farms, say from tilling to grazing; and to reconstruct farms after emergencies, such as floods. The loans are extinguishable by amortisation. The interest is generally 2 per cent. The principal security is farm mortgages, but life insurance policies and personal endorsements are accepted. This form of credit is viewed as successful. During the two years of its operation 12,000,000 francs have been loaned to farmers.

The Credit Foncier, or Land Credit Bank of France, is another notable credit institution, a great national financial institution like the Bank of France. It was established in 1852 under government regulation and the governor and two vice-governors are appointed by the French government. It makes loans on mortgages and to municipalities.

Mortgages on agricultural lands are of three kinds. 1. Short-time loans which are made for not more than nine years and are extended on land mortgages. These provide no amortisation scheme and are not payable before the expiration of the term. 2. Long-term mortgage loans which are made for periods of from ten to seventy years and repayable by amortisation. On a thirty-year loan the farmer would pay about 4½ per cent. interest, 1½ per cent. being for liqui-

dating the principal. Loans may be paid in full at any time during their term. 3. Current account on mortgage guaranty, or by opening a mortgage line of credit. Such credit may be used like an ordinary bank account. Its maximum time is nine years, and it bears about 5 per cent. interest. All mortgage loans originally bore an interest rate of about 4 per cent., but on account of money conditions the rate is now about 4.65 per cent. Loans may be made for only about one-half the value of the land generally, and for forest and vineyard lands, for only one-third.

Credit Foncier gets its capital by the issue of bonds. These are repayable in a maximum period of 75 years. Its chief function is to provide liquid credit for land. It has loaned over 9,000,000,000 francs since it began and it has outstanding loans to the amount of 5,000,000,000 francs. It pays the farmer cash instead of bonds when he secures a loan, and it is the only means of credit in France under the operation of which the mortgage inscription does not have to be renewed every ten years.[9]

Adaptability of European Systems to America.— It is not always possible to adopt institutions of other nations without modification, nor is it often wise to do so. In the case of credit systems, while the various long-time and short-time credit systems of Germany and France may have advantages for their particular communities it is somewhat apparent that they contain features which would be undesirable in the United States. Thus the feature of unlimited responsibility which the members of the Landschaften of Prussia carry might be entirely incompatible with the viewpoint of the average American citizen. Also it might not be feasible here because of the short tenure of land ownership obtaining in most parts of the nation, whereas in Germany the tenure is so settled that it gives rise to no difficulty. Again, in Germany land titles are generally quite se-

[9] Same, pp. 645–660.

cure, in Prussia they are never subject to doubt. In the United States there frequently exists great uncertainty in the tracing of titles. This doubtless would impair the process of issuing bonds on land mortgages. Again, in the case of the governmental system of furnishing rural credit as observed in France it is seen that the United States possesses no central bank which may be called on to furnish money for the purposes of credit; nor does it have the regional and local credit banks to act as mediating and distributing agencies. However, with the establishment of the twelve reserve banks as provided for by the recent banking law, and the existence of national banks throughout the nation it would appear that we possess or could form the organisation for realising such a scheme of credit. Since Congress has the power to appropriate money for agricultural education, and to finance irrigation, and conduct colossal engineering enterprises such as the Panama Canal, it could easily provide the financial assistance which a national rural credit system demands.

The organisation of such associations as the Raiffensen societies, resting as they do on a voluntary and mutual basis, is evidently within the reach of American farmers. We have had multitudes of local coöperative societies formed, many of which have failed to survive. No doubt the failure has been due to a want of good business methods in their management. The larger organisation which such societies maintain in European countries would secure better management and if accompanied by state laws regulating them and providing for a system of inspection and accounting would render them not only available but safe for American use. It would not be essential to have them officered and superintended by governmental appointees.

In working out its system of rural credit, as in other undertakings, America needs a larger measure of the mutual element than it has been accustomed to manifest. The factor that has made the various European undertakings suc-

cessful, perhaps more than any other, has been the providing of an agency by which the initiative and the coöperative ability of the smaller communities have been brought into use. A system which will provide the means by which our rural districts will be able to develop their own strength and thrift will be the agency which in the long run will prove the most helpful.

REFERENCES

"Agricultural Co-operation and Rural Credit in Europe"; Senate document 214, first session, 63rd Congress.

Morman, J. B. "Principles of Rural Credits."

G. K. Holmes, "Rural Credit," *Business America*, Vol. 13, No. 2.

Confidential Advance Sheets, Second National Conference on Marketing and Rural Credit.

Meyer Jacobstein. "Farm Credits in a Northwestern State," *Amer. Econ. Rev.*, Sep., 1913.

"The Problem of Rural Credit," *Outlook*, Jan. 13, 1914.

"The Fletcher Bill," *Independent*, Feb. 9, 1914.

"Credit for Farmers," *World's Work*, 27; 252.

"Federal Loans Proposed for Farmers," *Survey*, 31; 690.

"Agricultural Credit in the U. S.," *Amer. Econ. Rev.*, 2; 852–72.

"Agricultural Credit with Special Reference to Conditions in North Dakota," F. L. McVey and Meyer Jacobstein.

CHAPTER XI

THE IMPROVEMENT OF TRANSPORTATION AND COMMUNICATION

I. SOCIAL AND ECONOMIC ASPECTS

Some writers regard improvement of communication and transportation as the most important step in rural social betterment. In their estimation the breaking up of isolation is the most serious task and the improvement and extension of these agencies will accomplish this. Others see another side. They believe the perfecting of these agencies will bring the city nearer to the country, increase its drawing power over rural populations, and so injure the country. But as we shall discover the advantages outweigh the evils and make the improvement of rural communication and transportation positively desirable.

Significance for Civilisation.— The general influence of good highways on community life is seen in the case of the Roman Empire. In modern times before the advent of the railway it was regarded as impossible to maintain a government in America stretching from the Atlantic to the Pacific. Should the Pacific Coast region undertake to secede the great distance from the seat of government would effectually prevent coercion. And being so remote it would most likely have little communion with the rest of the nation, and would build up its own customs and interests, which would inevitably lead to dismemberment.

But could America have constructed permanent roadways across the continent the case would have been different. For the Roman Government controlled a wider and more diverse

area for centuries, marched its armies, sent its dispatches by carriers at the speed of over a hundred miles a day, and carried on commerce with its parts and with other nations. Only by means of its roads, some of which may be seen in a good state of preservation to-day, was this larger community life possible. And the establishment of that larger control was immensely important for laying the ideal and principles of government, securing tranquillity for peaceful pursuits, and extending civilisation to inferior peoples.

This larger aspect of the case is not entirely lost to-day in spite of the advent of railways, telegraph, and telephone. There will always exist large districts remote from railways and trolleys, particularly in declivitous regions. These will depend on highways for transportation and mail. Moreover, the project of building a great boulevard across the continent, which is under discussion, and that of establishing a Meridian Road from Winnipeg to the Gulf of Mexico, which is now being carried out, indicate that the advent of motor cars has renewed the pleasures of highway travel. The existence of good roads will extend the larger community satisfaction in this and other directions.

Social Function of Better Communication.— The advent of the telephone and rural mail delivery into country life has a marked influence on the life of the people. The outside world is brought near. Its news and ideas become a part of the daily life and thoughts of the country. Weather predictions for the safety of crops and for the pleasure and dress of farmers become available. Market reports of grains, fruit, garden produce, and stock may be known each hour of the day. The wonderful pleasure and advantages of the daily paper is open to every one. The feeling of being absolutely separated from the big world and of having no part in its life gives way to a satisfaction of knowing about it and entering into its affairs. Distant friends are brought closer. More frequent correspondence comes as a consequence.

Small parcels of goods are sometimes conveyed to farmers along the rural route. The enormous patronage of the parcel post shows how much such a system was needed.

As a matter of justice that half of our population which lives in the country has the same right of receiving its daily mail as has the city people. Perhaps it is impracticable at present to give this to people in remote and little settled regions. But the major part of country inhabitants could and should be reached. The cost of the extension is not great. The last figures at hand indicate that it is 92.7 cents per capita. That seems ridiculously low in view of the benefits received. Yet an Illinois community refused to patronise the rural mail service because it was supposed it would increase the taxes, forcing the Government to withdraw it.

Some of the effects of the rural mail service may be noted. First, about 1903, it had increased the amount of mail handled over 40 per cent., the number of letters registered, 57 per cent., the sale of postage stamps, 24 per cent., and the newspaper mail from 50 to 300 per cent., according to the region. The growth of fourth class mail matter has been large. This consists chiefly of small articles purchased by mail from the city stores. In a certain county in Maryland the fourth class matter has increased 90 per cent., which is almost entirely merchandise purchased by the women folk from the shops in Baltimore through the mails. That the city merchants are responding to their opportunities for trade is shown by an increase of 54 per cent. in the circulars and advertising matter delivered by the rural carriers.

Second, another and not unnatural effect of the system is the improvement of highways throughout the country. In locating free delivery routes the conditions of the roads is always an important consideration and many petitions have been denied on the ground that the highways were not fit for travel during the muddy months of the year. This point is now understood and nearly every petition that goes into the

United States Mail Department at Washington is accompanied by an offer or a pledge on the part of the county commissioners to improve the roads and to put them in fit condition as rapidly as the new system is established.

Third, another benefit is the increased valuation of country property. Frequently an increase in value of $2 or more per acre is given farms lying along these routes.

The service of the telephone in rural life in promoting social solidarity is noteworthy. Neighbours are brought nearer to each other. Easy communication between the housewives breaks up much of the loneliness and unsatisfied craving for association. Matters of business are attended to easily. Those of neighbourhood importance receive attention which would otherwise be neglected. Social organisation and neighbourhood welfare, where planning and conference is necessary, finds in the telephone its greatest assistant. The following facts show the widespread use of the telephone, table 15.

TABLE 22

TELEPHONES IN CORN BELT STATES

	1907	1902
Iowa	174,155	58,364
Illinois	170,343	49,440
Ohio	131,164	24,236
Indiana	115,086	28,190
Missouri	113,528	26,510
Kansas	96,455	3,509

"It will be noticed that the number of telephones nearly trebled in most of the states during the five years from 1902 to 1907. In Iowa and Illinois, it is interesting to note that there is an average of nearly one telephone for every farm, there being 190,000 farms in Iowa and 174,000 rural 'phones." [1]

Social Function of Roads.— 1. Many of the services which the mail system and the telephone perform for the country are

[1] *Rural Manhood*, January, 1911, p. 9.

also in a measure promoted by good roads. Good roads lie at the basis of the social institutions and associational life of the rural district. In a previous connection we saw the advantage and necessity of getting together to promote common interests. For the inhabitants of the land who do not have street railways, pavements, or sidewalks recourse must be had to the highways. Their condition determines the amount of concourse of a neighbourhood. Visiting, exchange of ideas and promotion of neighbourhood plans, interchange of courtesies, extension of fellowship, church and school attendance, the advancement of lodges, institutes, societies of equity and other farm organisations, entertainments, sports, amusements, spelling matches, music classes, women's clubs, young people's clubs, and kindred organisations, are affected by the state of the highways. Should the churches of a region desire to consolidate the plan only becomes feasible if the roads warrant it. People in the outlying districts will not consent to drive far over bad roads.

School consolidation is dependent on the state of the highways. The transportation of pupils over long routes is impossible where their condition is very bad. In five bad-road states the average attendance of pupils enrolled is fifty-nine, and in five good-road states it is seventy-eight out of a hundred. In parts of Ohio and Indiana where school consolidation has taken place, children are carried to school, attendance is increased, their health is promoted, and the evils of isolation are reduced. School consolidation is one of the very greatest agencies of the all around improvement of rural society. This alone creates a mighty demand for good highways.

The advantages of distant cities and villages are brought near to farmers. With the use of automobiles the time required to go a distance is reduced to one-fourth. Quick repairs of machinery are also made possible.

2. The economy which comes from good roads is great.

(1) The cost of hauling is reduced. "The cost of hauling twelve principal crops to shipping points in the United States during the crop year 1905–6 has been estimated by the Bureau of Statistics of the Department of Agriculture as $72,984,000. This excludes crops hauled to local mills. . . . The farmer's expense of hauling is greatly increased by bad roads. He may be obliged to deliver his product at the local shipping point when prices are low and the roads passable, or wait for a better market and run the risk of having to haul over rough roads with more horses to the wagon and a much lighter load. The expense of hauling under these difficulties may amount to double or even four times the normal cost." [2]

A large amount of perishable merchandise could also be saved if the highways enabled its movement at the appropriate time. There are over $2,000,000,000 worth of mules and horses in the United States. Double their hauling capacity or increase it by 20 per cent. and an enormous amount of wealth is created. With the use of motor tractors England has cut the cost of hauling farm products to market to four cents per ton-mile. Eighteen years ago the European cost of hauling was eighteen cents. (2) Truck and small-fruit farming are dependent on good roads. (3) Land values rise with road improvement. Professor Latta, of Purdue University, made an investigation that showed an average increase of five dollars an acre in territory where roads have been improved. United States Government investigations indicate "that the average percentage of improved roads in all states where the land is worth less than $20 per acre is 1.9 per cent., whereas in the states showing an acreage value of more than $20 improved roads constitute an average of 9 per cent. of the total mileage." [3]

(4) Wear and tear on horses, harness, and wagons would be reduced and entail a large saving. (5) Uniform traffic

[2] "Roads and Road Building," Office of Public Roads, U. S. Dept. of Agr., p. 3.

[3] *Ibid.*, p. 3.

for the railroads instead of congestion at times and unused rolling stock at others would produce a saving for them. Now the falling off of traffic at country stations is as high as fifty per cent. when roads are bad.

II. THE IMPROVEMENT OF ROADS

Several things are necessary in order to secure good highways. The education of farmers to the need and methods of improvement, the adoption of a better method of administration, and investigation and training in best ways of construction are necessary items.

An Educated Public.— Securing a public opinion which will move individuals and communities to take appropriate action is an educational process which, like other reform processes, takes much time to accomplish. This process of enlightenment has been under way for some time, but as yet only a small part of the nation is affected. Farmers' institutes, in which talks and discussions relative to roads take place, and whose object lessons and demonstrations as to methods of road-building occur, are effective agencies.

Commercial clubs of cities are agitating and discussing good roads. The motive seems to be twofold. Good roads about a city extend the commercial territory as far as they prevail. Automobile owners who are members of commercial clubs desire the improvement of highways so they may have longer and better motoring courses. Sometimes a scientific element enters. In a certain club a university professor of engineering is chairman of the roads committee and gives illustrated talks on highway betterment. The club has undertaken to drag a certain stretch of road near the city as an object lesson in road building.

Agricultural colleges give instruction in road construction, and their students, especially the short-term students, returning to the farms become exponents of the idea. The United States Department of Agriculture conducts investigations and

experiments in road-building and the use of the best materials adapted to different communities. Its experts build model roads at local expense but under Government expert direction as object lessons in a given region. During 1910, 55 such object lessons were conducted, "each constituting a miniature school of road-building, comprising 10 distinct types of construction." By an annual inspection of roads the Office of Public Roads has learned that during 1910, 22 short sections of model roads "had directly resulted in the building of 730 miles of additional roads according to the same method, and had brought about an expenditure, through bond issues, of $1,500,000." [4]

The Public Roads Office has broadened its educational programme. The men who direct the investigative work and construction and maintenance of object-lesson roads chiefly carry it on in the way of lectures, addresses, and papers. In 1910 they gave 523 lectures and addresses, as compared with 185 the previous year. The Office instructs young engineers in road building and these are called into positions as road engineers. The Secretary's report says, "a capable, progressive engineer constitutes an infinitely greater force in the movement" than object-lesson roads, because he goes on year after year in the work of road improvement.

Good-roads associations are at work in various parts of the country. Usually they work individually and at cross purposes. Coöperation is needed. California shows what united effort will accomplish. The legislature recently authorised a bond issue of $18,000,000 to improve the highways of the state. Two main highways to run the entire length of the state are to be built. Several counties have entered the movement. The people of Los Angeles have issued $3,500,000 bonds to pay for the construction of a complete system of macadamised road radiating in every direction from that city, and for a wide boulevard running direct from the

[4] Report of the Secretary of Agriculture, 1910, pp. 153–4.

city to the harbour at San Pedro. Santa Barbara County has raised $125,000 and is building roads with a heavy rock base and a surface of crushed granite mixed with oil. The good-roads movement is active all over the West, particularly in Colorado, Texas, Oklahoma, and Arkansas.

The Government and the big corporations of the country have coöperated to form the American Association for Highway Improvement. Government officials and heads of railway systems constitute the officers. A board of directors composed of eminent men from various walks of life is behind the Association. Their motive is commercial and philanthropic. They believe it will save the country $800,000,000 yearly, steady the food market, and break the social isolation of the rural districts.

Modes of Road Construction.— A brief account of the modes of road construction will prove suggestive. The Government, in its directive work, seeks to find the most available material which is the most economical for the different regions of the nation. In the South, for instance, large areas of clay regions exist. These clays are sticky and plastic. Unimproved roads become impassable. Neither sand nor stone abound for improvement. Fortunately, forests do abound. It is found that these clays may be burned so as to destroy their plastic properties and to harden into brick-like lumps capable of sustaining traffic. Data kept on 300 feet of this road construction shows an expense of $83.95. A mile at this rate would cost only $1,478.40 and would have the advantage of being permanent. In other portions of the South a sand-clay construction is used. Its cost ranges from $200 to $1,200 per mile, being mostly from $300 to $800. It is permanent in quality, subject to easy repair, and enables six bales of cotton being hauled, whereas previously a bale would be a load.

In some states gravel and stone are abundant. In such cases very durable roads may be secured at a cost, which a

few years under our present costly system of local supervision and patchwork plan, would cover. The permanence of such roads should recommend them. The primary cost would be almost the only one. Shell roads are constructed in some portions of the East and South where oyster shells may be secured cheaply. They are less durable than broken stone or gravel and demand more constant attention.

Many of the roads of the central and western states are being kept in a serviceable state by means of the split log drag. This is a very simple and inexpensive device which was invented by Mr. D. W. King of Iowa. There are about 2,000,000 miles of earth roads in the whole country which may be kept in repair economically by its use. A primary grading is necessary. Then an occasional use of the drag, easily drawn by two horses, especially a day or two following rains, is all that is required.

Not only the western but the eastern states, and even European countries are employing this device. A road official north of Boston, Massachusetts, reports an annual saving of 83 per cent. by its use. It is found to work well not only on earth roads but on factory city streets composed of a slag consisting of clinkers, lime, and steel; and even on the "black-waxy," or "buckshot," roadways which are the terror of the South. Such a road near Helena, Arkansas, impassable in open winters for forty years, responded to its use, so that even in an unusually wet winter, four mules were able to draw ten bales of cotton over it.

Requisite Administration.— Road administration lies at the foundation of road improvement. The present system of leaving the construction of roads to small communities is logically a very poor one. The delivery of United States mail might as well be left to every little school district and township in the United States in expectation of an efficient mail service. Because a mile of road lies within a road district is no reason for supposing that the whole interest in

having a mile of good road at that point is located within the confines of that district. Perhaps the people most interested in having a good road at that point live outside the district. If a farmer lives six miles from town where he has to sell his grain he is interested in having a good hard road-bed all the way. But if the building of that road is left to several different districts along the way he may be forever condemned to a state of bad roads. The matter ought to be vested in a larger community than the road district or the township. It is a matter for state or national enterprise, by means of which roads will be systematised, and will be erected and established as systematically as are our mail routes for city and country.

The report of the good roads commission appointed by the state legislature of Illinois says, relative to the waste and graft of the present township road commissioner system:

"We find enough taxes are levied in Illinois annually, if expended in an economical, uniform, and systematic manner under the supervision of a practical head, to construct a system of highways, intra-township, intra-county, and intra-state, that would be a monument to the progressive character of the people of the state and add materially to the prosperity of every community." Much petty grafting was discovered.

"There should be legislation taking the sole power of laying out roads or repairing or building the same from the township or road district commissioners, that should require these commissioners to file an itemised report of their financial transactions with some responsible central head that would require a plat of all roads to be filed of record and a report of the character of material and manner of construction and their condition at least once a year.

"There should be a superintendent of roads in each county whose duty it should be to oversee and supervise the laying out and construction and repairing of all roads in his county with the end in view that these roads should become intra-township and intra-county lines, thereby connecting up the

main points and in time creating a network of good roads throughout the state."

A Government report makes the following recommendations for administration betterment. "A good system would be to have a highway engineer competent to pass upon any question affecting the construction or maintenance of roads placed in charge of the road work of the county. He should report directly to the county court. This engineer should be responsible for road construction; for the repair and maintenance of roads; should prepare contracts and specifications; repair and maintain bridges; have charge of all road machinery and purchase all material, and should account regularly to the county court for all money expended under his direction. If one county could not afford to employ an engineer, two or three counties might share the expense and the benefits. Under the engineer's immediate jurisdiction should be placed a certain number of skilled road supervisors or road overseers, each having a given territory for which he is responsible. In his territory the overseer should have direct supervision over every road gang, and each gang should be in charge of a foreman. Under this system of organisation there would be no waste of public revenues in ill-conducted efforts at road-building, for every item of work performed would be a part of a general system devised in the office of the highway engineer and approved by the county court.

"In some cases it might be found better to centralise the road work and authority of the state under direction of a state engineer, with his corps of assistant engineers acting in lieu of the county engineers described in the last paragraph. This state system would probably have the advantage of less aggregate outlay for engineers and provide a more methodical system of county roads; but on the other hand, there would be lacking an intimate knowledge of local needs and conditions which would be possessed by the county engineer. The

state system would also weaken in a measure local authority over roads." [5]

Just what system will prevail will be a matter of experience. Road administration is in a transitional and formative state and it is of the utmost importance that it be directed along right lines. It is clear, however, that a larger administrative unit and control is demanded.

[5] "Roads and Road Building," Bulletin, Office of Public Roads, U. S. Dept. of Agr., p. 11.

REFERENCES

Butterfield. "Chapters in Rural Progress," pp. 17–22.

"Good Roads Without Money," D. Ward King, *Saturday Evening Post*, May 7, 1910.

"Hastening the Millenium," Thomas F. Logan, same, March 4, 1911.

Curtis, W. E. Letter to Chicago *Record-Herald*, June 8, 1911.

"Good Roads in Arkansas," Memphis *Commercial Appeal*, reproduced in Grand Forks *Herald* (North Dakota), June 28, 1911.

"Report of Illinois Good-roads Commission," Chicago *Record-Herald*, April 13, 1911.

Henderson, Charles R. "Social Spirit in America," Chap. 6.

"Rural Telephones in the Corn Belt," *Rural Manhood*, January, 1911, p. 9.

"Year Book," Department of Agriculture, 1906, p. 521 for road laws for 1906.

Johnson, Svenbjorn. "Good Roads — An outline of state road systems." Bulletin No. 2, North Dakota Public Library Commission.

"Syllabus of Illustrated Lecture on Roads and Road Building," Office of Public Roads, U. S. Dept. of Agriculture.

"The Use of the Split-Log Drag on Earth Roads," D. Ward King, U. S. Dept. of Agriculture, Farmers' Bulletin No. 321.

"The Construction of Macadam Roads," Austin B. Fletcher, Office of Public Roads, Bulletin No. 29.

"Good Roads for Farmers," Farmers' Bulletin No. 95.

"Report of the Secretary of Agriculture," 1910, pp. 152–57.

"Sand Clay and Burnt-Clay Roads," W. L. Spoon, Farmers' Bulletin No. 311.

"Good Roads," Preliminary Report of Joint Committee of Congress, Wash., 1913.

Hearings of same, Pt. I, Wash., 1913.

CHAPTER XII

SOCIAL ASPECTS OF LAND AND LABOUR IN THE UNITED STATES

Certain phases of land and labour in the United States are of special social significance. The amount of arable land to be developed, the amount of farming land unimproved, the tendency in the size of farms, the tenure of land, the supply, wages, and social conditions of farm labour are some of the more fundamental items. These affect the welfare of individuals living in the country and that of the nation as a whole. The nation's population is ultimately determined by the amount of its arable land.

I. AVAILABLE LAND AND POSSIBLE POPULATION

The amount of available land in the United States is the determining factor in the ultimate production of food, and as a consequence is the condition which fixes the future of the nation's population. By available is meant that land which may be put to some form of agricultural production.

Amount of Available Arable Land.— This has been a great factor in the development of the United States, offering an optimistic outlook for every ambitious young man who desired to farm, and affecting the wages alike of industrial and agricultural labour. July 1, 1908, there were 226,690,938 acres of surveyed and 528,204,358 acres of unsurveyed public lands vacant and subject to entry and settlement, a total of 754,895,296 acres.

It is now estimated by the Deparment of Agriculture that the United States, exclusive of Alaska and the outlying pos-

sessions, has an agricultural area of 1,404,000,000 acres, out of a total land acreage of 1,903,000,000. Of this agricultural area 1,143,000,000 acres are regarded as available for tillage, while another 361,000,000 acres are available for pasturage and orchards. Thus but a little less than 20 per cent. of this portion of our domain is irreclaimable and hence unavailable for some form of agricultural production.

An inspection of tables of unappropriated lands shows that almost one-half of this domain lies in Alaska where it is not likely to be developed soon. Besides this the semi-arid states of Arizona, Idaho, Nevada, New Mexico, Utah, Wyoming, and Colorado absorb from three-fifths to three-fourths of the remainder.[1] Irrigation will make much of this vast area usable for agricultural purposes. Through the work of the United States Reclamation Service a considerable proportion of the western desert area, extending from Arizona and lower California northward into the State of Washington, has been transformed, and the lands, formerly worthless as a national asset, now yield crops worth each year $250,000,000. Thirteen million acres in these deserts have been planted to grains, fruits, and other crops. Thirty million acres of land, enough to provide homes for 2,000,000 families, are yet to be irrigated in the West.

Recent government statistics indicate that a conservative statement of the amount which may be reclaimed for profitable farming by the drainage of swamp lands is 79,000,000 acres. An analysis of representative samples of swamp land soils made in the year 1911 at the University of Ohio resulted in the report that such soil could support 1,000 yields of corn at fifty bushels to the acre without any material soil exhaustion resulting.

In addition to what irrigation and drainage may bring into cultivation better methods of farming under dry conditions will recover another large area. What is known as

[1] "Public Document, No. 5452," p. 110.

"dry farming" succeeds in producing crops in the semi-arid regions in all seasons save those of absolute drought.

Unimproved Farm Area.— A considerable portion of the agricultural land of the United States consists of the "unimproved" areas of actual farms. In 1910, exclusive of Alaska and outlying possessions, there were 6,361,502 farms having an average acreage of 138.1. These farms comprised 878,798,325 acres, of which 478,451,750 acres, or 54.4 per cent., were improved and the remainder, or 45.6 per cent., were unimproved. The percentages in 1850 were 38.5 improved and 61.5 unimproved.

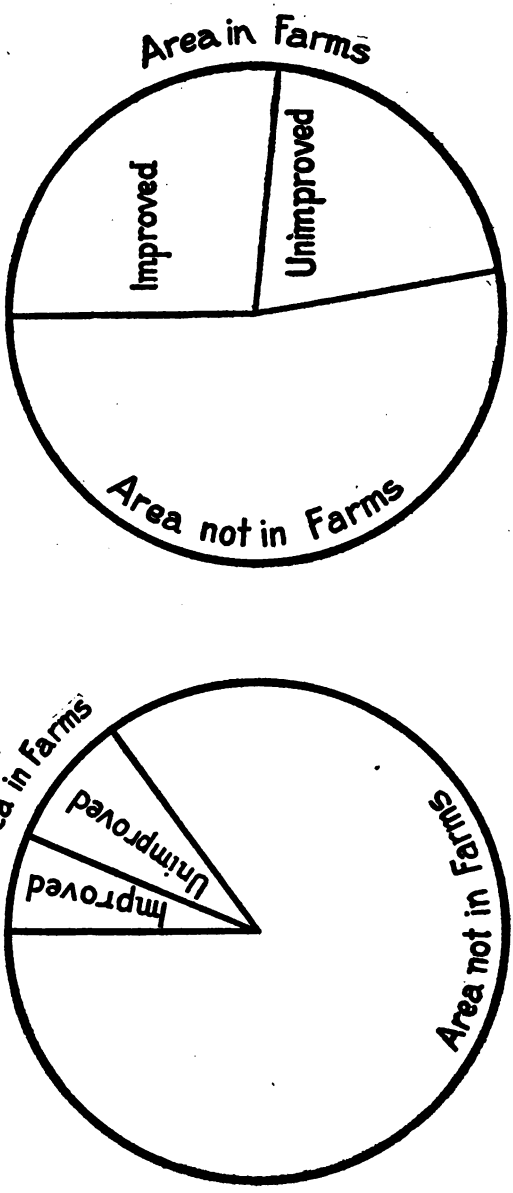
The accompanying pictogram (pictogram 3), indicates the changes which have been made in the relative amounts of the improved and unimproved land in farms, and of the area not in farms during the sixty years ending with 1910.

Of the total land area of the United States 25.1 per cent. is improved and of the total area which may be devoted to some form of agriculture, about 27 per cent. is improved.

An inspection of statistics shows that while there has been a general advance toward increasing the improved area, some divisions and more particularly certain states have manifested a reverse tendency. The accompanying table (Table 23) relative to the decline in farm acreage and in improved farm land affords the data for divisions and states in which such decline occurs.

Thus it is seen that the New England states have declined generally both in farm acreage and area of improved land, New Hampshire, Vermont, and Massachusetts being especially large losers in the latter respect; that certain states of the Middle Atlantic and South Atlantic divisions manifest a tendency in both directions; that Ohio has lost acreage; that Utah and Arizona each lost acreage during the last decade, but have gained improved farm land; and that California has lost in both instances from 1900 to 1910.

Several states have sustained large decreases in the pro-



PICTOGRAM 3

USED AND UNUSED LAND IN THE UNITED STATES

(Statistical Atlas, 1900, plate No. 127)

TABLE 23 [1a]

DECLINE IN FARM ACREAGE AND IN FARM LAND IMPROVED

Divisions and State	Acreage in Farms.				Per cent. of Farm Land Improved			
	1880	1890	1900	1910	1880	1890	1900	1910
New England:								
Maine	6,552,578	6,179,925	6,299,946	6,296,859	53.2	49.3	37.9	37.5
New Hampshire	3,721,173	3,459,018	3,609,864	3,249,458	62.0	49.9	29.8	28.6
Vermont	4,882,588	4,395,646	4,724,440	4,663,577	67.3	60.4	45.0	35.0
Massachusetts	3,359,079	2,998,282	3,147,064	2,875,941	63.4	55.3	41.1	40.5
Rhode Island	514,813	469,281	455,602	443,308	58.0	58.5	41.1	40.2
Connecticut	2,453,541	2,253,432	2,312,083	2,185,788	66.9	61.2	46.0	45.2
Middle Atlantic:								
New York	23,780,754	21,961,562	22,648,109	22,030,367	74.5	74.6	68.9	67.4
New Jersey	2,299,773	2,662,009	2,840,966	2,573,857	71.6	75.1	69.6	70.1
Pennsylvania	19,791,341	18,364,370	19,371,015	18,586,832	67.8	71.9	68.2	68.2
South Atlantic:								
Delaware	1,090,245	1,055,692	1,066,228	1,038,866	68.5	72.2	70.7	68.7
Maryland	5,119,831	4,952,390	5,170,075	5,057,140	65.3	68.9	68.0	66.3
Virginia	19,835,785	19,104,951	19,907,883	19,495,636	42.9	47.8	50.7	50.6
East North Central:								
Ohio	24,529,226	23,352,408	24,501,985	24,105,708	73.7	78.5	78.5	79.8
West South Central:								
Texas	86,292,219	51,406,937	125,807,017	112,435,067	34.9	40.4	15.6	24.3
Mountain:								
Nevada	530,862	1,661,416	2,565,647	2,314,757	64.9	43.5	22.3	27.7
Utah	655,524	1,323,705	4,116,951	3,387,699	63.5	41.4	25.1	40.3
Arizona	135,573	1,297,033	1,935,327	1,246,613	41.4	8.0	13.2	28.1
Pacific:								
California	16,583,742	21,427,293	28,828,951	27,931,444	64.3	57.0	41.5	40.8

[1a] U. S. Stat. Abstract, 1908, pp. 118–121; and Abstract Thirteenth Census, 268–271.

portion of improved farm land since 1880. These are Colorado, Idaho, Montana, New Mexico, Oregon, South Dakota, and Wisconsin. But the decline is only seeming, not actual. These states have settled rapidly, many new farms have been carved out, and the acreage in farms has multiplied accordingly. Consequently while their improved farm land has steadily increased in amount it has decreased relative to the farm land acreage.

Our interest here is in the bearing these facts have on the possibility of population in the nation. It is at once evident that if we consider the amount of subsistence the United States could ultimately produce we have hardly touched our ability to support population. If we suppose that the present ratio between urban and rural population should continue, something like the following conclusions might be drawn. First, since of the acreage in farms only about one-half is improved, were the remainder of equal productivity and were it put to use, our population could be doubled. Second, since the farm area is but a little more than one-half of the total area which may be devoted to some form of agriculture, providing the land which is not in farms is as productive as that which they contain, the population could be doubled again. That is, we could support four times our present population without changing the form of culture. Third, assuming the statement frequently made is true, and it is certainly true for several products of the soil, that our farms produce only half as much as intensive agriculture would enable them to produce, were scientific agriculture, applied to our whole domain susceptible of agriculture, the population could be doubled a third time, which would constitute a people of some 800,000,000. It is probable, however, that the unimproved land in farms is not as productive as the improved portions, and that the part of the domain not in farms is by no means as productive with the means of irrigation now at our disposal as the portion actually in farms.

But even making allowance for these deficiencies, it would seem that were all of our available agriculturally productive land used up to the limit of its productivity the United States easily could take care of 500,000,000 people.

An estimate of the amount of population the United States might support based on the water supply has been made. The arable land of the nation is classed as semi-arid, sub-humid, and humid. The water supply of the United States is estimated in terms of acre feet, an acre foot being 1 foot of water per acre; and 5 acre feet being regarded as sufficient for one person annually. On this basis, if the entire supply of water were used, we might expect a population of 348,000,000 in the year 2000; 575,000,000 in 2100; and 1,017,000,000 in 2200. Of the population at the latter date the Western States would have 200,000,000; the Median States, 200,000,000; and the Eastward, or humid states would possesses 600,000,000.[2]

It is to be observed that McGhee's estimate approximates the first one made above. We need not be greatly concerned now with what ultimate population is possible. In fact, we cannot accurately calculate what it can be because the inventiveness of man is a large factor in changing conditions of supporting life. The chief thing is to know that the extreme limit of support is a long way off.

When the several hundred million mark is to be reached is of more importance because on its determination depends the measures to be taken to provide for it comfortably and wisely. On page 5 Mr. Hill's estimate of population growth during the next four decades was given. Given in millions it ran as follows: 117 millions in 1920, 142 in 1830, 170 in 1940, and 204 in 1950. This estimate evidently assumes that the past rate of population increase is to continue. But our rate of national population increase has been subject to a gradual decrease. When we apply the aver-

[2] "How One Billion of Us Can be Fed." W. J. McGhee, *World's Work*, February, 1912, p. 443.

age lessening decrease which has obtained since 1860 to our future increase, the decennial population up to 1950 will be approximately in millions as follows: 110 in 1920, 130 in 1930, 152 in 1940, and 176 in 1950.

II. TENDENCY IN SIZE OF FARMS

Facts Expressing Tendency.— Statistics relating to the size of farms when they cover a considerable lapse of time are significant because they form the basis of deciding whether farms are passing into the hands of small or large proprietors. If there is a tendency toward a capitalistic form of agricultural production such facts should reveal it. Regulations which might be made by the state limiting the amount of agricultural land a proprietor should possess would have to depend on statistics pertaining to the tendency in the size of farms. Such conditions are undoubtedly a part of the question of the increase or decrease of democracy.

Since 1850 the average size of farms in the nation declined from 202.6 acres in 1850 to 133.7 in 1880, rose to 146.2 acres in 1900, and fell to 138.1 in 1910. The size of farms did not differ greatly at the two censuses 1890 and 1910. The average number of acres in farms in the geographical divisions in 1900 and 1910 respectively were: New England, 107.1 and 104.4; Middle Atlantic, 92.4 and 92.2; East North Central, 102.4 and 105.0; West North Central, 189.5 and 209.6; South Atlantic, 108.4 and 93.3; East South Central, 89.9 and 78.2; West South Central, 233.8 and 179.3; Mountain, 457.9 and 324.5; Pacific, 334.8 and 270.3. It is seen that in the east Mississippi River regions but one division indicated a growth in this respect, namely, the East North Central. The Southeastern divisions manifest a decided fall in the average size.

The southern states showed the most decided decreases in the 20 years ending in 1910. Alabama's average fell from 138.8 to 78.9; Arkansas', 127.7 to 81.1; Florida's, 140.7 to 105.0; Kentucky's, 129.1 to 85.6; Louisiana's, 171.3 to 86.6;

Mississippi's, 155.8 to 67.6; North Carolina's, 141.9 to 88.4; South Carolina's, 143.4 to 76.6; Tennessee's, 124.8 to 81.5; Virginia's, 167.4 to 105.9; West Virginia's, 162.6 to 103.7.

Georgia, Texas, and Oklahoma showed heavy declines in the last decade.

The changes in the average size of farms for the nation as a whole are largely accounted for by the abrupt and heavy changes which have taken place in certain states which have been undergoing settlement and the experiment of introducing agriculture. This is denoted by this table (Table 24) which gives the fluctuations for the decades ending 1890, 1900, and 1910.

TABLE 24[3]

VARIATIONS IN AVERAGE SIZE OF FARMS IN CERTAIN STATES

State	Average Acreage per Farms in 1880	1900	1910
Arizona	176.8	333.2	135.1
California	461.8	397.4	316.7
Colorado	258.6	383.6	293.1
Idaho, (1890)	197.2	183.4	171.5
Kansas	154.6	240.7	244.0
Montana	267.1	885.9	516.7
Nebraska	156.9	246.1	297.8
Nevada	378.1	1174.7	1009.6
New Mexico	124.9	416.8	315.9
North Dakota, (1890)	277.4	342.9	382.3
Oklahoma	182.0	251.5	151.7
South Dakota, (1890)	277.2	362.4	382.3
Texas	208.4	357.2	269.1
Utah	69.4	212.4	156.7
Wyoming	273.3	1333.0	777.6

Iowa, Minnesota, New Hampshire, Oregon, and Washington made decided gains.

The radical tendencies in either direction are due to local or regional conditions. The decrease of the farm acreage of the southern states arises from the continued process of breaking up large plantations, formerly operated on the basis of slavery, into smaller proprietary or tenant tracts. The increase of the western region comes largely from the crea-

[3] U. S. Stat. Ab. 1908, pp. 119–121; and Abstract 13th Census, 280.

tion of large stock ranches; but in Minnesota, the Dakotas, Kansas, and Nebraska it is also partly due to the establishment of large grain farms. The stock ranches are breaking up and the tendency in this region toward a larger acreage is probably temporary. Consolidation of farms which has occurred in Iowa is likely to continue so long as new lands may be purchased cheaply. The very large grain ranches of the Dakotas show signs of disintegration.

Another method of ascertaining what size farms are developing fastest consists in grouping the farms of the nation by acreage. The table entitled "number of farms of specified acreage" embodies such an arrangement. Farms of from 20 to 500 acres in size constitute 84 per cent. of the number of all farms in 1910, and those of 20 to 100 acres amount to 44.8 per cent. of all farms. The percentage of farms from 20 to 100 acres was exactly the same in 1910 as in 1880, while that of farms of from 20 to 500 acres was 84.0 in 1910 and 87.1 in 1880. Thus it is apparent that in the classes of farms having the heaviest percentages, those of 100 to 500 have lost to the class 20 to 100 acres. Of this class those of 20 to 50 acres have risen from 19.5 to 22.2 while those of 50 to 100 have fallen from 25.3 to 22.6.

By geographical divisions, the New England, South Atlantic, and Pacific sections show a growth in the percentage of farms of 100 acres and under and a decrease in that of all classes of farms above 100 acres. The Middle Atlantic shows a growth in that of farms under 20 and in that of farms having from 175 to 500 acres, that of the other classes losing. The other divisions gain percentages in classes of farms, the others losing or remaining stationary, as follows: East North Central in those under 20, and in those of 100 to 175; West North Central in those under 20 acres, and all above 175 acres; East South Central in those under 50 acres, all the others losing; Mountain in those of 100 to 500 acres, all the rest losing.[4]

[4] Abstract Thirteenth Census, p. 304.

TABLE 25 [5]

NUMBER OF FARMS OF SPECIFIED ACREAGE, 1880–1910

Year	Under 3 Acres	3 and Under 10	10 and Under 20	20 and Under 50	50 and Under 100	100 and Under 500	500 and Under 1000	1000 acres and over
1910	18,033	317,010	504,128	1,414,356	1,438,069	2,494,461	125,295	50,135
1900	41,385	225,844	406,641	1,257,496	1,366,038	2,290,282	102,526	47,160
1890	.....	.....	265,550	902,777	1,121,485	2,008,694	84,395	31,546
1880	4,852	134,889	254,749	781,574	1,032,810	1,695,983	75,972	28,578
Year	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1910	0.7	5.0	7.9	22.2	22.6	34.2	2.0	0.8
1900	0.7	4.0	7.1	21.9	23.8	39.9	1.8	0.8
1890	...	...	5.8	19.8	24.6	44.0	1.8	0.7
1880	0.1	3.4	6.3	19.5	25.3	42.3	1.9	0.7

[5] Table 102, Abstract Twelfth Census, and Abstract Thirteenth Census, p. 303.

Capitalistic Ownership.— Probably the only considerable menace to small ownership lies in the direction of capitalistic investments in large tracts of land which have been made mostly in the West, Southwest, and Southeast. Some very large holdings exist. Fragmentary statements of the approximate character are given for what they are worth. It is said that Henry Miller of California owns 4,500,000 acres; E. J. Marshall of Los Angeles owns 4,000,000 acres in the Southwest; Mrs. King, 1,000,000 acres in Texas; Hetty Green, over 1,000,000 acres; 100 men own 17,000,000 acres in the Sacramento Valley; 40 foreigners — mostly English and German — own 22,910,740 acres; Frederick Weyerhauser controls 30,000,000 acres. Some of these possessions are larger than some of the states. The Weyerhauser control embraces an area equal to that of one-half of New England or that of South Carolina. Or the property of Mr. Miller is about the size of West Virginia. It is probable that, should all the large holdings, which are actually owned by single individuals, get reported correctly, they would increase the average size of farms in the United States. According to the

table on size of farms, only eight-tenths of one per cent. of the farms embraced 1,000 acres or more. Forest land and mineral claims are probably not included under the heading of farms.

The importance of land ownership and size of farms is seen in conditions in England and Spain, where extensive estates are withheld from useful production to the great injury of the people; in the recent action of English landlords who transformed into game premises large areas of land in agricultural use; in the comparison of the condition of the average agricultural labourer in England and in France, the former being a mere wage worker with no secure home or footing, the latter, with his little family group being owner of the land he farms.

III. TENANT FARMING

Farm Operation.— Whether or not the tillers of the soil shall be owners or tenants is a most important consideration. This is denoted by the attention given the subject not only in public discussions but in the legislative undertakings of advanced nations. Not only has Great Britain passed laws providing long-time methods by which small purchasers may become landowners for purposes of farming, but various governments make it one of their chief motives in providing better rural credit to encourage farm ownership on the part of ambitious men of small resources. The statesmen of the United States must deal with this problem at some time and it is well that students of rural conditions should be informed as to tendencies in farm ownership.

The tendencies relative to farm ownership and tenancy in the nation at large are denoted in the accompanying table (Table 26).

Thus in the whole United States tenancy grew from 25.5 to 37.0 per cent. between 1880 and 1910. It lost slightly in two divisions, North Atlantic and Western; it gained heavily in the other regions, especially in the South Atlantic and South Central.

TABLE 26 [5a]

LAND TENURE IN THE UNITED STATES

Division	Per cent. of Farms Operated by					
	Owners		Managers		Tenants	
	1880	1910	1900	1910	1880	1910
Continental United States..	74.5	62.1	1.0	0.9	25.5	37.0
North Atlantic	84.0	82.5	2.1	2.35	16.0	15.25
South Atlantic	63.9	53.4	0.9	0.7	36.1	45.9
North Central	79.5	70.2	0.9	0.9	20.5	28.95
South Central	63.8	47.85	0.6	0.4	36.2	51.75
Western	86.0	83.85	3.15	2.2	14.0	13.95

The conditions in the various states of the nation relative to farm tenure, both in number of farms and the acreage are well shown in the accompanying pictogram (Pictogram 4) which is reproduced from the 13th Census reports.

It is observed that in many states there is a vast difference in the showing made by the items owners, managers, and tenants in the two diagrams. Thus Montana operates about 5 per cent. of the number of its farms but about 45 per cent. of the acreage in farms by managers. It is also observed that ownership appears larger in the North generally when viewed relative to number of farms than by acreage and the reverse is true for the South. In the West managerial farming seems small and ownership large when number of farms is considered, while ownership is much smaller and manager production much greater when the acreage is regarded.

There is no one uniform cause of the growth of tenancy in the United States which is apparent. The conditions in different sections of the vast national area are so various and divergent that an explanation true in one place is only partly true or wholly irrelevant in another. Thus in the South it is evident that the comparatively larger number of tenant farms is due to the leasing of small acreages to impecunious farmers.[5c] This has been a growing phenomenon

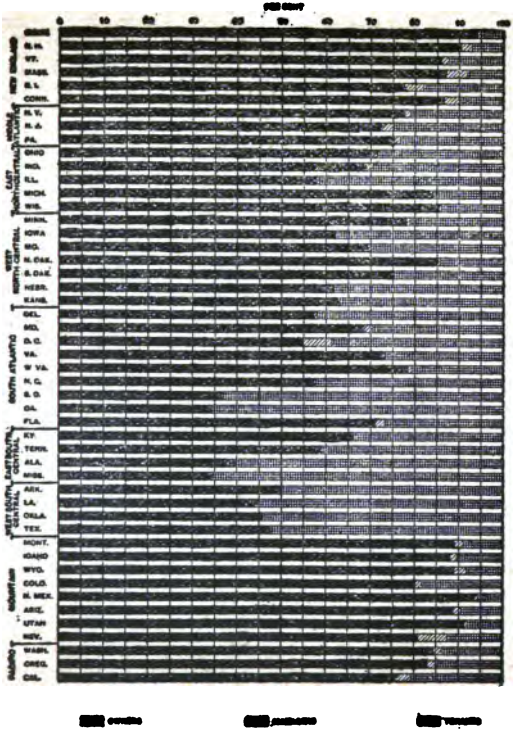
[5a] Abstract Twelfth Census, Table 149, and Abstract Thirteenth Census, p. 286.

[5c] Thirteenth Census, Vol. V, p. 881.

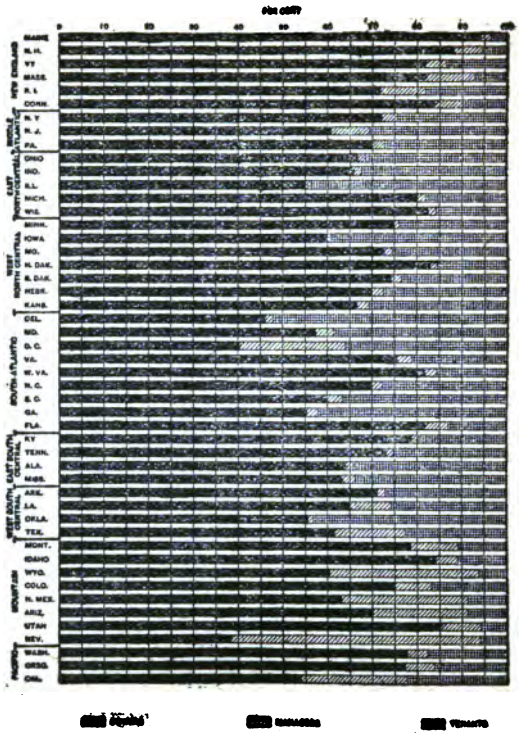
PICTOGRAM 4 5b

TENURE OF FARMS

NUMBER OF FARMS, CLASSIFIED BY CHARACTER OF TENURE OF OPERATOR: 1910



ACREAGE OF ALL LAND IN FARMS, CLASSIFIED BY CHARACTER OF TENURE OF OPERATOR: 1910



5b Abstract Thirteenth Census, p. 289.

since the negroes were freed. In recent years many white owners of small farms have moved to factory cities, where they and their children obtain employment. The retirement of well-to-do farmers into neighbouring villages and cities is rather general throughout the nation but it is particularly true in the North Central states. It is often associated with the consolidation of farms. A prosperous and ambitious farmer purchases the land of neighbour after neighbour. Later he retires and leases his land to one or more renters.

Another influence in the direction of absentee landowners comes from the purchase of nearby farm land by the residents of cities, especially of cities of the smaller class and of small towns. In a developing region this is a very tempting and profitable line of investment for men who are in the professions or other callings where the accumulations are not used in the calling directly. A further cause of tenancy is seen in the heightened value of land. Thus in the northeastern portions of the nation the land values are lower than in the North Central part and there is much less tenancy in the former than in the latter section. In Pennsylvania a division of the counties according to land values showed that tenancy was 29 per cent. in the highest farm value group, 21 in the medium, and 16 in the lowest priced group. The same thing is found in New York State.[5d]

Third, a larger period is required to save money with which to buy a farm than was previously the case. As a consequence, each successive generation must remain longer in the tenant class. The next table shows this (Table 27).

From generation to generation a smaller percentage are able to make the transition to farm ownership. "Of the occupiers of farm homes who were less than 25 years of age, a smaller percentage were owners in 1900 than in 1890. This is true for every age period given in the table except

[5d] "Farm Tenancy in the U. S.," B. H. Hibbard, Annals Am. Acad., Vol. 40, p. 29–39.

TABLE 27

PERCENTAGE OF PERSONS OWNING AND HIRING FARM HOMES

Age	1890		1900	
	Owned	Hired	Owned	Hired
Under 25 years	32.6	67.4	27.7	72.2
25 to 34 years	49.8	50.2	45.3	54.7
35 to 44 years	64.0	36.0	64.4	35.6
45 to 54 years	72.3	27.7	70.7	29.3
55 years and over	82.2	17.8	81.4	18.6

one — the reverse being true for the period from 35 to 44. This suggests that the decline in landownership is due to the inability, or disinclination, of the succeeding generation to acquire land ownership so generally as their predecessors." The various forces and conditions governing the attainment of land and also those which retard investments in land are at the base of the decline.[6]

The tendencies in the United States are not decisively toward extended consolidation and enlarged holdings. In the regions where the enlargement is most noteworthy as has been seen, it is apparently due to the operation of causes other than the advantage in production which arises from large holdings. Quick and large rises in land values, as in Iowa and Illinois, have induced multitudes of owners to sell out and go to newer regions in the United States and Canada where several times the amount they owned can be purchased for what they received. In the southeastern states it is the outcome of the dependency of agriculture on an ignorant, coloured, labour population.

Further, it is likely that when the possibility of procuring cheap land in the United States and Canada has passed farmers in the improved agricultural regions will cease to sell to neighbouring farmers. When this point is reached, and when, also, estates begin to be divided among the descendants of present farmers, we may expect to see the cessation

[6] "Landownership and Tenancy," H. C. Taylor, "Cycl. Amer. Agriculture," 4: 174 ff.

of the consolidation tendency and the development of small and intensive farming.

Farms are almost always leased in Great Britain. In France 77.6 per cent., and in Germany 83.6 per cent. of the farmers own all or a part of their farms, while in the United States 35.3 per cent. are tenants.

Significance of Land Ownership and Tenant Farming.—There are two opposing views as to the effects of tenant farming and small proprietorship.

1. Young and Mill held that small proprietors form the basis of individual prosperity, independence, and well being. Young, who travelled through Europe in 1787–8, and who believed in large agriculture, testified that while there was much poor farming on small properties, "yet the industry of the possessors was so conspicuous and meritorious that no commendation would be too great for it. It was sufficient to prove that property in land is, of all others, the most active instigator to severe and incessant labour." He thinks the way to get mountains farmed to the very top is to let them out as property to small owners.[7]

Mill reviewed the facts and literature of the continental method of small holdings as opposed to the English practice of large estates in his attempt to get England to see the mistake and loss incident to its practice. He believed the evidence proved that peasant properties conduced to the moral and social welfare of the labouring class by increasing their industry to what a Swiss statistical writer described as "almost superhuman industry"; that territorial arrangement is "an instrument of popular education." "The mental faculties will be most developed where they are most exercised; and what gives more exercise to them than the having multitudes of interests, none of which can be neglected, and which can be provided for only by varied efforts of will and intelligence?"

[7] Quoted by Mill, "Principles Political Econ.," Bk. II, Chaps. 6 and 7.

Small proprietorship is "propitious to the moral virtues of prudence, temperance, and self-control." Labourers are liable to spend their entire wage. "The tendency of peasant proprietors, and of those who hope to become proprietors, is to the contrary extreme; to take even too much 'thought for the morrow'; to be penurious. Even among the pleasure-loving French people of the agricultural sort "the spirit of thrift is diffused through the rural population in a manner most gratifying as a whole, and which in individual instances errs rather on the side of excess than defect."

Mr. Mill further holds that small holdings would not interfere with the desirable and much needed purpose on the part of the workers to exercise prudence and restraint in the increase of population. Some writer had held that peasant proprietors would be likely to multiply up to the limits of food production and thus force a minute subdivision of the land. Mr. Mill believes that without education and habituation into the exercise of prudence the land proprietors, like other workers, would increase in number up to the food limits. But that if indoctrinated — like their urban brothers — they would exercise due restraint. Furthermore he marshals facts from Switzerland, Norway, Prussia, and other continental countries to demonstrate that peasant proprietorship not only did not evoke over-population but rather checked it. But even the division of landed property does not necessitate a division of farms, for the Flemish peasantry have the habit of not dividing property.

Concluding his chapters on peasant proprietors he says:

"As a result of this inquiry into the direct operation and indirect influences of peasant properties, I conceive it to be established that there is no necessary connection between this form of landed property and an imperfect state of the arts of production; that it is favourable in quite as many respects as it is unfavourable, to the most effective use of the powers of the soil; that no other existing state of agricultural econ-

omy has so beneficial an effect on the industry, the intelligence, the frugality, and prudence of the population, nor tends on the whole so much to discourage an improvident increase of [redacted] numbers; and that no existing state, therefore, is on [redacted]hole so favourable, both to their rural and their physical welfare. Compared with the English system of cultivation by hired labour, it must be regarded as eminently beneficial to the labouring class. French history strikingly confirms these conclusions. Three times during the course of ages the peasantry have been purchasers of land; and these times immediately preceded the three principal eras of French agricultural prosperity." [8]

2. The other view is that effective farming in the future can only be done by a system of large properties and tenant renters whose rights are protected by legal provision. It is held that the capital which needs to be invested in machinery and equipment in order to make farming competitively profitable and possible cannot be provided by small owners. They will be forced to sell to capitalistic owners who can make the large investments needed. Moreover, the fall in prices places a shock on the landlords and farmers which is not felt by other callings in the same manner. Small proprietors have nothing to shield them from the shock and must give way to men of larger resources.

It would seem that recent events and the spirit of present times is in favour of the position held by Mill. The progress that is being made in agricultural development in Europe and Great Britain is most conspicuous just where the larger estates are being broken up, parcelled out, and vested in numerous small proprietors. This is notably the case in Ireland and in Denmark and in both countries farming and dairying have made prodigious progress, and in both the consequences have been of the best for the character and intelligence of the citizenship. New interest in life, renewed

[8] "Principles of Political Economy," J. S. Mill, Bk. II, Chaps. 6 and 7.

industry, progressive and coöperative undertakings, enriched social and moral life, have been the results.

Improving the Tenant System.— How to make a good tenant system is an important consideration. Experience indicates that it cannot be done by law. At least two things are thought to be necessary. First, the existence of a high sense of justice on the part of both landlords and tenants as the basis of a recognition of mutual rights. Second, the development of agriculture to a point where it is possible to ascertain what is right and fair. "For example, both landlord and tenant may be fair-minded, and yet without a knowledge of the rapidity with which a given fertiliser is made use of by a given system of cropping on the various kinds of soils, it is impossible to come to an accurate conclusion as to the proper compensation to be paid to the retiring tenant for unexhausted fertilisers." The British system during a century of experience has marked out a plan of adjustment more complete than elsewhere.[9]

Of much importance to rural sociology is the effect on rural social life of absentee landlordism and of tenant farming.

The economic effects of absentee landlordism with its attendant abuses has had historic examples. Perhaps the most notable recent one has been that of Ireland. The profits of the large estates were spent abroad, draining Ireland of its productive capital; the best land of large estates was turned into pasture land; and when tenants made improvements on farms to enlarge the production the rents were systematically raised to absorb the reward of initiative and industry. Consequently a premium was placed on neglect, shiftlessness, drunkenness, and social squalor, and agricultural Ireland was emigrant as to its best and most vigorous element, decadent economically and socially, and rapidly increasing in pauperism and insanity.

[9] H. C. Taylor, "Cycl. Agr.," 174–84.

The various Land Purchase Acts passed by Parliament revolutionised Irish society, for it was mostly agricultural and rural. Small estates could be purchased on one hundred year p[illegible]ents. Buildings and sanitation were fostered. Agriculture[illegible] education were promoted. Coöperative undertakings took root. As a consequence the inhabitants are becoming thrifty, industrious, interested in their own community affairs, temperate, and a larger life is full of promise.

In America social degeneration due to tenancy has been noted. Absentee landlordism visits on the given region heavy economic injuries. The tenant who keeps up the buildings, grounds, fences, and fertility of a farm as he would were he owner is rare indeed. No doubt juster laws and more progress in scientific agriculture would form a basis for the correction of some of these matters. Now the tenant sees no profit in the upkeep of the farm. He believes he obtains the greatest advantage in getting the largest returns with the least effort. Could just returns for his efforts be secured the results would be better.

But the economic phase is less important than the social. The community interests are at stake, and are put in jeopardy wherever a neighbourhood is given up to renters dominantly.

This fact has been observed frequently. Strong spoke of it in his "New Era" many years ago. It has received passing attention now and then since that time. Near Syracuse, New York (1894), life in certain tenant communities seemed pathetic. Church, school, and home indicated systematic neglect. In North Central Kansas (1895) renters exercised neither interest nor influence in community matters. Observations in Montgomery County, Illinois (1901–1903), resulted in the belief that schools and churches were declining under tenant conditions. Resident owners recognised and deplored the fact. Observers in North Dakota report similar conditions wherever renting predominates.

As an accompaniment of the neglect of church and school

the moral and cultural tone of the neighbourhood sink low. Coöperative ethical activities of country districts usually reside with the church. The larger cultural and social outlook associate themselves with church and school and are products of their life. Immorality, vulgarity, low ethical ideals, insufficiency of informational and esthetic agencies and outlets result from irresponsibility and transiency.

IV. FARM LABOUR

Closely connected with the subject of tenancy is that of farm labour. The topics are commonly treated together but for our purposes it will be better to assign each a separate consideration.

Labour Supply.— Deficiency in the supply of farm labour appears frequently enough to indicate seriousness. Various reasons are assigned for the dearth.

First, it is assumed to be inherent in a democracy. Says the Country Life Commission:

"So long as the United States continues to be a true democracy it will have a serious labour problem. As a democracy, we honour labour, and the higher the efficiency of the labour the greater the honour. The labourer, if he has the ambition to be an efficient agent in the development of the country, will be anxious to advance from the lower to the higher forms of effort, and from being a labourer himself he becomes a director of labour. If he has nothing but his hands and brains, he aims to accumulate sufficient capital to become a tenant, and eventually to become owner, of a farm home. A large number of our immigrants share with the native-born citizen this laudable ambition. Therefore, there is a constant decrease of efficient farm labour by these upward movements." [10]

Second, the seasonal demand for labour produces a deficiency in the supply at the time it is most needed. This

[10] Report of the Country Life Commission, p. 39.

is not confined to one section of the country, but is quite general. It is common in New York in the fall to find camps of men, women, and children along the roadsides who have come out of the cities for a few weeks to engage in hop-picking. In Central Arkansas one observes that the people from the mountain regions, where conditions are backward, travel in covered wagons to the lowlands in the cotton picking season to live and work till the white staple has been gathered. The grain fields of the west central states and of neighbouring Canadian states make their yearly appeal through the press for hundreds of thousands of harvest hands. A standing advertisement in the Grand Forks (North Dakota daily) *Herald,* for weeks preceding the harvest of 1911 called for 50,000 men to care for the grain in the Northwest. Men from the cities, and from the forests of Minnesota make yearly pilgrimages to meet the demand. The advertisements are likely to run ahead of the needs. Winnipeg papers reported that 12,000 men were stranded in that city ten days prior to harvesting. The fruit regions of the Pacific Coast find difficulty and expense in obtaining their pickers at the proper time.

Third, in domestic circles, also, there exists the problem of "help." The larger the farm the more serious the problem. The presence of children in school deprives the mother of home help. Social attractions in cities, the regular hours of labour to be found there and the supposed "higher respectability" of city labour, are conditions which lessen the supply of workers in the country.

Fourth, a permanent labour supply is made impossible by the absence of provision for home and family life on the farm. Married men with families find little encouragement for settling down as hired help.

Providing a Labour Supply.— Attempts are made from time to time to obtain a more permanent labour supply. Farmers gravely and copiously discuss the problem but fail

to see that the solution lies in establishing proper and permanent living conditions. The southern states are making a more or less concerted attempt to induce immigrants from abroad to settle and work in the South.

Perhaps the most interesting and serious effort to obtain permanent workers is that of the sugar beet industry. The securing, retention through the season, and making the labour supply permanent constitute a great problem in that industry. The following methods have been or are being worked out.

1. In the middle, eastern, and some western states most of the work has to be done during the summer. Pupils and teachers of schools are available then and are used annually in thinning, weeding, and hoeing beets. These workers are generally satisfactory and improve from season to season.

2. Near large cities the unemployed element go out to farms during the day, Polish women walking out and back daily. Although this is a satisfactory class of labour, because of its industry, and, often, its previous experience with beets in Europe, it is limited to city regions and has to compete with city industries.

3. An attempt is made to induce families to become permanent residents of rural districts. Several methods are used.

First, in one section farmers are building at least one tenant house.

Second, immigrants do not like to be isolated from their countrymen. Several sugar companies are making inducements to get settlers by selling small tracts of land, part of which must be put in beets, on easy terms. Another company forms small farms, builds comfortable homes, furnishes tools, etc., and rents them to farmers who will raise small areas of beets. Yet another company divides its land into acre tracts to rent to Russians exclusively. The family

is to have the land deeded to it after a given number of years.

Third, another plan consists of a portable house furnished for living accommodations of several men. The labourers contract to do the hand work for several beet growers at from $18 to $21 per acre, depending on the number of hoeings and other details included in the contract.

Still another method is the use of large groups of Japanese who live in camps and scatter in squads for the work. If they operate under a competent foreman they are capable of doing excellent work, but may become careless and trifling in spite of everything.[11]

In the Northwest it is planned to divide farms into 160-acre tracts and import permanent labourers. A small house will be constructed and a few acres set aside for the free and exclusive use of the labourer. He will work during the summer for the farmer and during the winter if work can be had.

Effects of Labour Conditions.— The effects of rural labour conditions are unwholesome and serious. They pertain to those who labour and to the employing communities.

First, certain results ensue from seasonal and transitory conditions. Economically, the present status is unsatisfactory and wasteful. The quality of labour is low and untrained, the amount is often insufficient, it is difficult to obtain at the right time, is hard to retain, and the wages paid are frequently excessively high. Further, there is a potential menace which might become real. If it should happen that the cities were to absorb all the idle labour supply, the farmers would suffer an enormous loss; or they would offer such wages that the workers would be driven to the country, visiting a consequent damage to municipal industries.

Socially and morally community life suffers from the annual invasion of a great transient, irresponsible, and fre-

[11] "Year Book," Dept. of Agr., 1906, pp. 269–74.

quently semi-criminal body of workers. The floating class from the cities is not a desirable element to set free in a neighbourhood. Gamblers, cut-throats, and thieves accompany the pilgrimage to prey upon the labourers and the communities. The sheriff of Polk County, Minnesota, states that the jail of that county, with a capacity of thirty or forty inmates, is filled each fall with characters of the latter class. At other times of the year it has but two or three inmates. This is typical of the region. The effect on the labourers is detrimental. Transient and away from the steadying influences of home surroundings, they are made irresponsible. Socially they have no privileges or life. They often sleep in barns or out of doors in stacks, eat in hordes, and are regarded by the community as social pariahs, and as mere puppets incidental to farming. This tends to perpetuate a hobo class, and to create hoboes afresh. It puts a premium on ignorant labour. The influence on the larger national life and character must be apparent.

Second, there is a condition of country life and labour which arises from intemperance. This excerpt from the "Report of the Country Life Commission" expresses it:

"The liquor question has been emphasised to the Commission in all parts of the country as complicating the labour question. It seems to be regarded as a burning country life problem. . . : The saloon is an institution that must be banished from at least all country districts and rural towns if our agricultural interests are to develop to the extent to which they are capable."

The evils are stated to be especially hard in the South. Prohibition, where it has been adopted, has frequently increased rather than lessened them because of inability or failure to prevent the shipment of liquor into the community from outside.

Third, there are some reactions to the labour situation which are taking place in agriculture. One consists in changes in

farm management by means of which farming is slowly adapting itself to the situation. This is partly in the "nature of more intensive and business like methods whereby the farmer becomes able to secure a better class of labour and to employ it more continuously." More frequently it is "in the nature of a simplification of the business and a less full and active farm life." In the Northwest there exists a tendency toward "a primitive nature farming, with the maximum of grazing and meadow and the minimum of hand labour." Another reaction is toward abandoning the more difficult lands and extending machinery farming.

Remedial Suggestions.— There are many remedial suggestions relative to agricultural labour conditions. We have previously noted methods of securing a labour supply. The subcommittee on "unemployed and lack of farm labour" of the New York Commission on accident and prevention says that notwithstanding the severity and undesirability of farm work "it is an undoubted fact that some men would undertake this employment if a system of labour bureaus were available through which they could hear of the work." The Commission recommends "a third deputy commission to have charge of the bureau of public employment offices; such offices to be established in the eight largest cities, together with branches wherever they may be deemed necessary." This provision is to supply demands for work in the various fields, to coöperate with schools, to secure employment suited to the child's abilities, and thus to serve as a vocation bureau.[12]

Second, a substitute for a labour supply is offered in the suggestion that the establishment of smaller farms will enable the farmer to do his own work. Third, scientific agriculture promises to have beneficial effects. A higher order of intelligence on the part of farm labour will be needed in future to secure the necessary productivity. "If rural

[12] *Survey*, May 13, 1911, p. 265.

schools can be organised in such a way as to impart the added knowledge of scientific agriculture to the average boy and girl on the farm, the next half-century will see a continuance of the movement recorded in the last half. Farm labour will become more and more independent and self-directed, and the only large amount of agricultural labour other than that of the farm owner or tenant will be that of his children who are being trained in the art of science and agriculture."

If not, so that the average farm labourer is not able to apply the arts of agriculture successfully "the country will see a return to the customs and organisations of an early date; a few men in charge of large farms and possessing a mastery of the science and art of agriculture will direct the labour of an army of wage employés of a lower grade of intelligence and skill." [13]

Fourth, the establishment of such conditions that labour will be rendered permanent is most desirable and offers the remedy which will be best for the worker and for the community and nation. The agricultural worker needs to be bound to the soil but not as a serf. Labourers have their rights in the community as a community quite as much as the farmers. Our recognition now is based on property ownership rather than on social membership.

(a) The workers must be given facilities for establishing homes. Family and neighbourhood privileges are essentials to contentment and a responsible life.

(b) They must be given better quarters and must be protected from discouragement and the saloon. "The shortage of labour seems to be least marked where the labourer is best cared for." "The best farmers usually complain least about the labour difficulty."

(c) A shortening of hours of work is needful to equalise

[13] "Agricultural Labour," by L. G. Powers, "Cycl. Amer. Agr.," IV: 198.

rural and urban length of the labour day. This should be accomplished to make life attractive. It can be done with the adoption of scientific methods, the vocational education of children, the establishment of machinery to do the drudgery, and the inculcation of a larger view of labour by the farmers. "Already in certain regions of well-systematised diversified farming the average hours of labour are less than ten."

(d) The labourer should be given assistance to contribute his part to community life. A generation of workers educated into such participation would perpetuate its kind.

(e) There needs to be established certain helpful institutions. One is a simple saving institution. In cities and industrial communities it has proven a successful agency in the development of thrift. Another would consist of life insurance adapted to the needs of farm labourers. Coöperative buying and selling associations would assist to cultivate thrift, business management, the power of coöperative effort, and a steadying sense of responsibility and dignity.

Fifth, the lightening of women workers' burdens is demanded. Better planning and building of the house, the adoption of conveniences and comforts, the installation of machinery to do the heavier work, and the teaching of home economics in the schools will go far to render the lot of the "hired girl" easier and pleasanter. The establishment of creameries is taking off much of the hard work connected with the household process. Certain other kinds of work, such as laundering, could be done in an establishment connected with a creamery.

Accidents Among Farm Labourers.— We have had occasion to notice the industrial character of agriculture by reason of the large amount of machinery it uses. This same fact makes agricultural work in connection with much of the machinery employed even more dangerous than manufacturing labour. Being distributed over a large area among

many separated communities the serious nature and the large number of accidents have not become generally known and as a consequence sentiment of a preventive nature has not formed and become operative.

The most dangerous machines in Minnesota, where the facts of accidents are being gathered, are corn shredders, corn shellers, wood saws, and belts and gear wheels of various machines, the former ranking first and the latter second in their deadliness. During twenty months corn shredders occasioned forty-one per cent. of the accidents reported. The 1911 Minnesota Legislature passed a law (copied from Wisconsin) designed to prevent these accidents.

In accidents from corn shellers the operator's hands are caught in the feed-rolls and he is drawn into the machine. Prevention consists in safety attachments which make it impossible for the operator to reach these feed-rolls. Guards attached to the wood-saws would be sufficient to prevent serious accidents in their use.

Belts and gears are dangerous because they catch the limbs and clothes of the workers, drawing the latter into the gearing or whirling them about on the belt. Desire for economy on the part of farmers has led manufacturers of agricultural machinery to leave gearings unguarded. The enforcement of legislation calling for appropriate protection of such parts would reach the situation. Permanent guards for the belts of stationary engines, and portable guards for tractors are possible remedies for dangerous belts.

REFERENCES

"Report of the Country Life Commission," pp. 28, 39, 43. Sturgis & Walton Co.

"Organised Labour and the Farmer," *Outlook*, 84:853.

Technical World Magazine, January, 1909. Article by Henry M. Hyde.

"Public Document of the United States," No. 5452, p. 110.

Chicago *Record-Herald*, June 8, 1911 and March 31, 1911.

"Encyclopedia of Social Reform," pp. 645, 1266, 1271.

"Report on Unemployed and Lack of Farm Labour," *Survey*, May 13, 1911, pp. 264–5.

"Cyclopedia of American Agriculture," H. C. Taylor. "Land Ownership and Tenancy," IV: 174 ff. and G. L. Powers, "Agricultural Labour," IV: 198.

Mill, J. S. "Principles of Political Economy," Bk. II, Chaps. 6 and 7.

"Henderson's Modern Methods of Charity," article on Ireland by J. M. Gillette, pp. 272–87.

Plunkett, Sir Horace. "The Rural Life Problem of the United States."

"United States Statistical Atlas," 1900, Plate No. 127.

"United States Statistical Abstract," 1908, Tables Nos. 60 and 61.

"Digest of Twelfth Census," 1900, Tables 102, 103, 149.

"Year Book" of the Department of Agriculture, 1906, pp. 269–74; and 524.

Lescohier, Don D. "Work Accidents and the Farm Hand." *Survey*, October 7, 1911, pp. 946–951.

Hibbard, B. H. "Farm Tenancy in the United States." *Annals Amer. Acad. Pol. and Socl. Sci.*, March, 1912, p. 29.

Coulter, John Lee. "Agricultural Labourers in the United States," same, p. 40.

Abstract Thirteenth Census.

Thirteenth Census, Vol. 5. "Agriculture."

Annals Amer. Acad., Vol. 40.

CHAPTER XIII

RURAL HEALTH AND SANITATION

I. GENERAL CONSIDERATIONS

Benefits of Betterment.— The advantages of health are patent. Men have grown healthier and more robust with the development of civilisation. Powell has shown how prolific certain epidemics were among the American Indians at the time of the arrival of Europeans. Their population was frequently decimated by scarlet fever and smallpox and kept at low figures.[1]

Ratzel states that primitive man was more prone to disease, and was less robust and vigorous than our present civilised humanity.[2] Recent investigations indicate that in urban regions longevity increases at the expense of adults, being prolonged by reducing deaths among infants and children. There is some evidence that diseases, like weeds, have a tendency to spread among certain sections of the population.[3] The farming population is, however, more immune from inroads of diseases peculiar to civilisation than urban dwellers, as we previously saw.

While all this is true country residents have reasons for seeking to improve rural health conditions. "Of all persons, the farmer should be best provided with healthful surroundings. He has sunlight, clean air, exercise, normal sleep,— blessings so indigenous that he does not know their value; he does not realise the necessity of giving attention to sani-

[1] United States Ethnological Reports, Vol. XV.

[2] W. I. Thomas, "Source Book for Social Origins," pp. 45–47.

[3] "Weeds and Disease," Robert Hessler, M.D., *Survey*, April 1, 1911, p. 51 ff.

tary surroundings. There are no energetic boards of health to look over his premises. He is so separated that the neighbours do not complain. He has taken health for granted. His exercise is likely to be only work, and it may not develop his physique or contribute to the promotion of health. The number of crooked and bent persons on the farm is very great. The city man is likely to have a better carriage. Probably no persons are in greater need of physical training and setting-up than the farmer, to correct effects of his daily occupation and to keep the body resistent and resilient." [4]

Direction of Improvement.— The effort to improve health in rural communities must take several directions. 1. Application of the principle of cleanliness and of sanitation by the elimination of filth- and dust-catchers, and by sterilisation. The emphasis is to be placed on sanitation rather than on medicine. The study of morbidity should be displaced by one of sanitary conditions. People must be taught how to live rather than left to trust stumbling and deficient experience.

Two fundamentals of sanitation are positive and clear: Keep the body in normal condition and function; and exclude all manner of contamination. Each person must come to know himself by self-study, to learn his peculiar personal equation relative to conditions which produce morbidity. He must come to be the authority on what is good or bad for him rather than trust to the advice of a physician who can know his peculiarities of constitution but slightly. Pure air, abundant and regular sleep, regular habits, cleanliness, wholesome food and drink, active exercise, moderation, calm mind, are absolute essentials to health, though prescribing them may be trite.

2. Choice and preparation of foods. In some ways the

[4] Bailey — Editorial note to Vol. I, Chap. 8, "Cyclopedia of American Agriculture."

food of the farmer has great advantages. Because he buys less than city dwellers it is less prone to contamination and adulteration. The cooking may not secure the very best results, but it is generally simple and veracious, and is superior to much that is served at prominent hotels and clubs. There needs to be a reaction against the growing practice of patronising factory made foods in favour of home provisions.

3. Reduction of household work. Frequently on the farm there is an enormous and needless expenditure of energy. Simplification, planning, and the use of mechanical devices are necessary means of its reduction. In many families there is a large and wasteful display of foods. There is a "conspicuous consumption" at the table in which the average person revels when a few simple dishes would be better. Excess, gluttony, and waste in food and labour would be better by their absence.

4. State supervision. This should be in the nature of inspection by governmental authority of the essential conditions of life and should reach to the planning of homes, their management and location, so as to anticipate and prevent diseases and hardships. Professor Irving Fisher gives several reasons for supplementing municipal hygiene. The country has no other kind than governmental supervision possible. The city is dependent on the country for water, milk, and other supplies. Typhoid is, in origin, a rural disease and must be combated by controlling rural privies and other sources of pollution. Even in Europe fifty per cent. of the wells are unfit for use according to Koler.[5]

A bureau of health supported by the United States government would be of assistance to rural regions in giving more attention to importation of injurious and adulterated foods and drugs, the prevention of domestic adulteration; investigation into rural human and animal diseases, and the promo-

[5] Report on National Vitality, p. 59.

tion of rural sanitation. The work carried on by the Department of Agriculture in the enforcement of the food and drug act illustrates this. In 1910 it pressed 766 criminal cases and 224 seizure proceedings, gaining convictions in 224 of the former and 132 of the latter, a large portion in each instance remaining pending.[6]

5. Education should be used as an agency of rural health improvement. Besides organised play, which, if introduced, would encourage exercises of a useful nature for symmetrical development, special attention should be given to practical teaching relative to matters of health and sanitation. Available literature of a simple nature now exists to carry on this work, and there is sufficient reason why it should find general use as texts and supplementary reading.

So long as farmers empty slop and sewage about wells which contain their drinking water, dig wells in barnyards to be used alike by man and beast, maintain outdoor closets so vile and filthy as to stifle those using them, leave dead animals to rot unburied near dwellings, encourage conditions which breed germ-transmitting flies by the millions, defy laws of air-space and ventilation in homes and school buildings alike, there is ample confirmation of the assertion that our rural schools should give instruction in these subjects.

II. SANITATION IN THE HOME.

The subject of household sanitation is almost as large as the field of sanitary engineering. It is so extensive that attention to the details of the matter is practically impossible in the allotted space. The larger essential matters alone will receive consideration.

Care of the Home.— Most people are forced to make use of the buildings already on the farm. "In such a case it is well to remember that the cardinal sanitary points about a home are freedom from dampness; light and sunshine in

[6] Report of the Secretary of Agriculture, 1910, pp. 31–32.

every room; large windows, sufficient air space, good ventilation, and sufficient heat. These should be had at any cost." Small rooms may be merged, improving ventilation and reducing cost of light and heat. Dark and unventilated stairs should be remedied. "The surroundings of a country home should be well kept, the garden being filled with ornamental shrubs and flowers. There should be no backyard littered up with cans, ashes, and other refuse, but there should be some portion of the grounds, close to the house set apart for the use of children." They should be encouraged at an early age to keep their playground free from rubbish which should be burned or buried.[7]

In the general care of a house the matter of dust-prevention is important. The use of rugs which may easily be removed and cleaned, the application of a good floor dressing, elimination of germ laden dust by proper methods of sweeping, cleaning, and dusting, are essential safeguards to health.

Water.— 1. Poor water and health. There is an increase in the impurity of our water with the increase of density of population. Very little pure water exists. "In Vermont the examination of 231 samples of water from wells, springs, and ponds showed that 22 per cent. of the springs, 50 per cent. of the wells, and 41 per cent. of the ponds were impure or of doubtful purity. The importance of pure water to a community is shown by statistics of death rates. They show that with the improvement of city water supplies the death rate has greatly decreased.[8]

2. Wells are depended on chiefly for the water supply in rural districts. They are often made defective by being located on lower ground than privies and barnyards, in the barnyard, and by the absence of curb or tight fitting cover. Pumps are superior to old-fashioned well sweep or pail and rope, though the "Old Oaken Bucket" sounds fine in a

[7] Brewer, "Rural Hygiene," pp. 39–41.

[8] Monthly Bulletin, N. Y. State Dept. Health, April, 1908.

poem. "In India the well-bucket is a fruitful source of the dissemination of cholera, and what is true of cholera is generally true of typhoid fever."

Geological formation has much to do with the quality of water. A good well is one that is sunk into a water bearing stratum that is separated from the surface by an impervious layer of clay, slate, or similar material. It should be curbed, lined with cement from top to bottom, and provided with a tight fitting cover that has sufficient pitch to throw off all rainwater.

Artesian wells usually furnish pure water, save in limestone regions. Depth is not necessarily a sign of purity. A geologist should be consulted as to the strata of a region.

3. It is generally supposed that spring water is pure. The same facts relate to the creation of impurities in springs as in wells. An especial cause of impurity is dipping dirty vessels into it. Clearness of water is not an evidence of purity. Instances are known where large springs have drawn their supply from polluted marshes located on the other side of the mountain. Springs should be curbed, covered, and piped.

4. Rainwater is probably the purest country water supply since there is little impurity in the air. Cisterns should be provided with sand and gravel filters to extract particles of dust. The cistern is better located in the garret or above ground, as underground walls frequently crack and let in pollution from surface drainage. As we have seen there are motors of various sorts to elevate water. The pneumatic tank offers a very satisfactory method of elevation.

5. The use of surface water always should be avoided as dangerous, since it is likely to be impure. Sewerage, drainage, tramps, railway trains, animals, are sources of contamination.

6. When a contaminated water supply must be relied on some purification process should be used. The most satisfactory method is a good sand filter, but the cost attached

is usually preventive. Domestic filters, generally, are fine in theory but unsafe in practice. But such a filter as that made by the Naiad Filter Company of Boston, when carefully operated, produces pure water. Otherwise the most reliable and economical method is that of boiling the drinking water for a period of from five to twenty minutes. The Forbes steriliser boils water at the lowest possible cost with practically complete destruction of germs. In default of this, boiling in a suitable vessel on the kitchen stove will do. The water should be cooled and kept in a stone jar or "water cooler" safely covered.

The best expedient for determining the purity of the water supply is to send a small bottle of water to the State Board of Health, or the State Public Health Laboratory for analysis.

Garbage and Sewage.— The safe disposal of garbage and sewage, the refuse and slops of the home and barn, are vital matters to farm health.

1. The disposal of ashes, garbage, manure, and miscellaneous refuse is perhaps more a matter of esthetics than of health in the country. Yet the more regularly they are disposed of the better for the healthfulness and comfort of the home. Kitchen refuse from the preparation of food can be saved for the pigs and chickens. It should be collected in galvanised-iron pails which are furnished with tightly closing covers to prevent exposure to the sun and to avoid flies. Whatever cannot be used in this way should be burned or buried. Recently a device has been patented which enables the housekeeper to place the garbage in a section of the smoke pipe of the range, where it dries out rapidly, burns, and leaves only a little charcoal behind, which may be used for fuel.

Manure should be removed for use, both for sanitary and economical reasons. It loses value by fermentation, and by weathering and leaching if left for a considerable time. Moistening will delay fermentation. A simple and cheap device against flies is to have a screened-in cage, into which

the manure is deposited for its weekly or monthly removal.

2. Sewage disposal is positively vital to health. Not only is it important in the open country, but even more, in the half-developed village or town with its usual unsanitary conditions. In such communities the contaminating privy and cesspool occur close by the well. The premature introduction of a water supply system causes a saturation of the ground from the sewage, so that the wells of households not yet connected with the water supply are jeopardised. Disastrous results from epidemics of typhoid fever and other diseases often ensue. The extent to which sewage matter contaminates the soil was shown by Foder for the Hungarian city Budapest. "By analysing soil at different levels from the surface to a depth of about 15 feet, he found, over an area comprising 15 acres, about 1,000,000,000 pounds organic matter, equivalent to the excrement of 100,000 people voided during thirty-seven years." [9]

If the slops from the kitchen are not fed to animals they may be emptied over a considerable area of ground, a new place being chosen each time. Oxidation and nitrification of the organic matter which is carried on in the open air rapidly converts them into inoffensive earth material. In case a kitchen sink and drain pipe exists, a system of sub-surface irrigation may be used. Earth soil, or human excrement may be disposed of in the same manner, except in cases of disease, whenever the soil is favourable and where the use of a water supply produces a solution of not less than 500 parts of water to one of solids.

Filtration by disposing sewage in sand plots is another mode. A tract of sand containing 200 to 400 square feet of surface and having a depth of from three to five feet is best. It should be raked to a depth of an inch each week to keep it free from clogging, especially in winter.

Cess-pools should be used in no case. They merely place

[9] Theobald Smith, M.D., *op. cit.*, p. 6.

the sewage out of sight. Uncemented cess-pools allow the saturation of the surrounding soil and thus create a menace. Cemented ones crack and cause the same danger, besides being too troublesome to operate, as frequent cleanings are necessary. Where a water-carriage system is absent the earth-closet is allowable.

The chemical indoor closet is a possible means of disposing of human excrement. A receptacle placed under the seat to catch the excrement contains chemicals which, in character, are antiseptic and deodorising. Careful attention to emptying the collection of waste and to cleansing the receptacle makes this a safe and desirable mode of disposal, where a water-carriage system is impossible, but neglect makes of it an instrument of filth and a positive danger to health.

Insects and Animals.— Insect life is a source of danger to the health of rural inhabitants. Many of the menaces may be removed and all may be reduced.

1. Flies are the most prevalent and insinuating nuisances and source of disease. Dr. Brewer writes: "Flies are not only a nuisance but are one of the means of disseminating typhoid fever, cholera, and diarrhœa among human beings, and runa and anthrax among horses and cattle." The house fly or stable fly is our worst enemy. It breeds in filth, feeds on excrement, and flies to foods. Its breeding place is preferentially horse-manure, but it uses any collection of vegetable matter for this purpose. Multiplication takes place rapidly. Each female lays about 120 eggs at a time which develop in about ten days. Consequently about thirteen generations mature during one season and the descendants of one fly may amount to many millions.

The hairy legs and bodies of the fly make splendid lodging places for the disease germs of dust and filth. This is strikingly shown by microscopic examination. The fly wipes its feet on whatever it walks over, as photographs of exposed plates have shown. Thus it is seen how disease germs deposited

in exposed privy vaults, manure piles and garbage heaps may be transferred to the house, and to the foods over which it walks, and thus how everything is polluted it touches.

The preventives for this pestilence may be stated tersely. Keep the flies out of the house by means of screens and if they get in exterminate them. Destroy their breeding places by abolishing the privy, clearing away garbage, and covering the stable refuse. Disinfect all discharges from the body which may serve to spread disease germs by means of flies. Place cattle pens, hog lots, chicken yards, and stables some distance from the house.

Besides the house or stable fly, there are chiefly two others which breed in human excrement exclusively, and in overripe and decaying fruit.

2. The mosquito is the bearer of malarial and yellow fevers. The former is largely confined to the country and especially to the newer and undrained regions. Only the genus, Anophales, carries malarial germs, the genus Culex being innocent. Anophales breed "in still side pools of small streams, in the swampy pools at the margins of larger ponds, in stagnant water in ditches, in the beds of old canals, in the still water at the sides of springs, and occasionally, though rarely, in old horse troughs."

A third form of mosquito, stegomya, is the bearer of yellow fever, inhabiting, like the other kinds, open and stagnant water.

The best means of combating mosquitoes consist in locating nearby breeding places and filling, draining, or treating them with kerosene oil — the kind known as light fuel oil — every two or three weeks; or in introducing certain fish which feed upon the larvæ, such as top minnows, sticklebacks, young sunfish, or goldfish. Frogs also prey upon them. Since malaria and yellow fever can be transmitted only by mosquitoes which have bitten victims of those diseases, adequate prevention consists in dealing only with the insect

bearers. Screening the windows and doors of houses is, of course, a protection of those within doors against mosquitoes. In case malaria has been contracted, quinine is relied on as probably the most effective remedy.

3. Certain other insects and animals are disease bearers. The "cat and dog flea" is doubtless the bearer of the bubonic plague, infecting not only cats and dogs, but more insidiously rats and such rodents as ground squirrels. Pink-eye in the southern states is distributed by a very minute flea. "Texas fever" is carried among cattle by the common cattle tick, and anthrax among cattle by the gadflies and horseflies. When these flies subsequently bite human beings malignant pustules may result. The common bedbug is also suspected.

Extermination of the rat in San Francisco stopped the spread of the bubonic plague. Various states have waged war on the ground squirrel. Cats and dogs should be kept free from vermin, or else not maintained. Burning sulphur candles, and the use of gasoline, or a mixture of wood alcohol and corrosive sublimate, by means of a vapouriser, are useful means of exterminating bed-bugs.

Foods.— It is recognised that foods are a great source of danger to health. Adulteration, against which the United States and many states have legislated, and have established food commissioners and inspectors to carry out such legislation is not the only source. Care in selecting, keeping, and cooking food is needed, especially of meats and animal products.

1. Putrefaction is liable to occur in meats and meat products. This produces a virulent poison known as ptomaine which is a by-product of the growth of the putrefaction bacteria. Cooking does not destroy it. Flesh, fish, shell-fish, milk, cheese, pies, sausages, etc., are subject to this.

2. Unclean fruits and vegetables, contaminated by filth on the soil in which they are grown, and by sprays, handling with unclean hands, exposure to the dust of stores and streets, and even to the filth of dogs, are causes of disease. Thorough

washing, preservation in cool clean places, the adoption of sanitary processes of production, handling, and marketing, are needed protective devices. A clean ice box or refrigerator should be in every house.

3. Hogs are frequent sources of diseased conditions. Trichinosis has its origin in diseased hogs. It is conveyed to them through the fæces of animals or men which are infected, through flesh, and by refuse and rats from slaughter houses; and is conveyed to men by eating uncooked meat, raw pork, or ham. Thorough cooking of hog meat, and the inspection of hogs are necessary safeguards. Hogs are also the source of tape worm which is communicated to them from infected fæces of men or animals; and man in turn, contracts it by eating the uncooked meat, or other food washed in infected water, or through unwashed, infected hands. More healthful hogs may be secured by constructing piggeries which are clean, warm, well ventilated, and well lighted. This method of care is a decided antithesis to the common notion that anything is good enough for a hog.

4. The milk supply is one of the most important food sources and also one of the greatest causes of sickness, and since it is produced in the country for both rural and city consumers has come to receive much attention because of its vital nature. It may be dangerous (1) because it contains disease bacteria; (2) because it contains too many bacteria.

Of 544,533 deaths in the registration area of the United States in 1905, 105,553 were of children under 5, and of these 39,399 died of enteritis. Behring, an authority of Germany, finds that of every 1,000 children born 233 die during the first year, 510 males out of 1,000 reach manhood, and not over one-third of these are fit for military duty. This he attributes to milk infection during infancy. Dr. George Goler of Rochester has shown that clean milk has reduced mortality of that city in children of five and under, from 7,451 in the decade of 1887–96 to 4,965 in that from 1898–

1906, although meanwhile Rochester increased its population 20 or 25 per cent.

Tubercle bacilli are frequent in milk. It is evident that if tubercular cows give tubercular milk and that if persons consuming this milk may contract the disease, which has been demonstrated, government inspectors of milk cows or preventive treatment of milk are necessary.

Hogs may contract tuberculosis by feeding on infected milk. Butter and cheese preserve the germs a long time and consequently it is not safe to manufacture tubercular milk into those products.

Not only may disease bacteria get into milk from cows, but they may intrude during milking from manure on the cow, dust in the barn, filthy hands and clothes of the milker, unsanitary pails, and improper methods of preservation. Schroeder estimates that as large a quantity as one part of cow dung to 400 of milk is sold in many cities. Good authorities believe milk is dangerous when it contains over 50,000 bacteria per cubic centimetre. The Pediatric society of Philadelphia puts 10,000 as the maximum, although milk in most cities contains millions of these germs, especially in the winter months.

Sanitary requirements on the farm consist in securing healthy cows, in keeping them clean and in clean, well protected, well ventilated barns in winter. The following requirements are recognised in order to have a pure milk supply: (1) Healthy cows. (2) Wholesome food and pure water for cows. (3) Good protection against storms and cold to prevent exposure and colds. (4) Clean barns, clean cows, clean milking places. Dust and dirt convey bacteria, and odours impose a bad taste to the milk, those from alfalfa especially. Cows should be groomed before milking. (5) Sufficient ventilation in barns. Each cow secretes about 7 pounds of moisture daily in breathing, sufficient to provoke tuberculosis where ventilation is very defective. (6) Clean hands and

clothes in milking. (7) Sterilised pails, and if used, sterilised mechanical milkers. (8) Milk should be cooled, as soon as drawn, to a temperature of 45° to 50°, and kept at that temperature or below, since bacteria multiply very rapidly at a higher temperature.

Transmissible Diseases.— Malaria, tetanus, diarrhœa, dysentery, measles, scarlet fever, diphtheria, smallpox, whooping cough, typhoid fever, and tuberculosis are considered transmissible. They are all serious either in themselves or in their after effects. Measles is followed by such results as deafness from inflammation of the ears, and even tuberculosis; scarlatina, one of the most serious diseases of childhood, is followed by disorders of kidneys, deafness, and feeblemindedness; whooping cough, one of the most fatal diseases to children, may result in pneumonia or tuberculosis of lungs. Mental deficiency follows childhood afflictions often enough to make them dreaded.

Each one of these diseases may have its particular kind of cause and its special régime or line of treatment. We have already discussed typhoid, malaria, tuberculosis, in certain respects, in so far as they depend on special kinds of sources. Preventive means of those special conditions were suggested. Diphtheria may require the use of antitoxin; smallpox, that of vaccination, etc.

Our province is to suggest general precautions which should be resorted to when a disease is suspected. Such precautions as the following should be adopted:

(1) Isolate the sick person in a room accessible only to the nurse or person taking care of the patient. (2) The attendant and physician should slip on a gown or its equivalent while in the sick room. (3) Secretions and excreta should be disinfected before taken from the room. (4) As soon as the subject is stricken the bed and body clothing should be disinfected. (5) Separate eating utensils, clothes, cloths, etc., should be kept in the sick room and disinfected there.

(6) Neighbours should be excluded from the sick room absolutely, and from the home if possible.

III. NEIGHBOURHOOD SANITATION.

Need of Coöperation.— Sanitary and hygienic precautions on the part of the neighbourhood are almost as essential to the health of a community as are those of the individual home. The individuals of a community visit from home to home, attend church and other congregating places, and especially the children meet each other daily in school. It is apparent that conditions of various kinds arise over which the homes of a neighbourhood, acting in their individual capacities, can have no control, and yet by which their health is placed in jeopardy.

Swamps and ditches containing stagnant water, on the surface of which pestilential mosquitoes breed, may exist in the neighbourhood. Collective action is required to drain or fill such places. Mines and factories may dump their refuse into the streams which pass through the farms to contaminate the water supply. Nearby cities may pollute the streams or neighbouring low places with their sewage and garbage. Trains which pass through drip with oil and from their toilet rooms emit quantities of human excrement. Tramps leave their refuse strewn around. The slaughter houses of villages and small cities are located in the country and are commonly without regulation. Pernicious and germ laden dust from adjoining highways is swept into open homes in the summer.

Only concerted action by the residents of the community is capable of remedying most of those conditions. Some of them, as that of the distribution of human excrement by trains, require regulation by the larger public, state or nation. But agitation and discussion of every one of them by the public brings enlightenment and finally remedial measures.

The School and School Children.— The school constitutes a special condition which requires particular attention. If every home took perfect care of its children, watching them diligently to detect the symptoms of transmissible diseases, and isolating them as soon as such maladies are discovered, following the precautions outlined in the preceding division, very little attention by the school to such matters would be needed. Unfortunately this ideal state in the majority of homes is wanting. Very few parents withdraw their children from public concourse as soon as one of the so-called "harmless" variety of disease is detected, and few of the disinfecting preventives and precautionary devices for spreading the sickness farther are practised. Investigations into health condition of school children indicate the prevalence of transmissible diseases. Of 432,937 children examined in Massachusetts in 1906, 27,342, or about 16 per cent., were found diseased, not including those with defective eyes or ears. The following table gives a list of the diseases and the number of children subject to each.

TABLE 28

DISEASES OF SCHOOL CHILDREN

Diphtheria	238	Other diseases of oral and respiratory tracts	5,103
Scarlet Fever	313	Otitis (inflammation of ear)	407
Measles	637	Other diseases of ear	363
Whooping Cough	973	Conjunctivitis	779
Mumps	267	Other diseases of eye	2,159
Chicken Pox	548	Scabies and pediculosis	8,745
Influenza	276	Skin diseases	3,453
Syphilis	36	Nervous diseases	146
Tuberculosis	115	Deformities	142
Erysipelas	17		
Adenoids	2,525		
		Total	27,342

Similar results have been obtained in other large cities. Conditions there are no doubt intensified by close contact. But if the list surpasses that of the country in transmissible

diseases, it is scarcely likely that this is the case relative to affections of eyes, ears, nostrils, spine, etc. The testimony of rural school nurses is to the effect that the proportion of deficiencies among the children of the country schools is quite as great as among city school children.

The latter class of defects mentioned calls for quite as serious attention on the part of rural schools as transmissible diseases. Deficiency in physical conditions of children mounts very high in cities. Recent statistics bring this out in a most alarming way. From 25 and 30 to 70 and 75 per cent. of defective children are found, the per cent. varying from city to city. The accompanying table (Table 29) exhibits the percentages of the most frequent physical defects in four of our large cities.

TABLE 29

PHYSICAL DEFECTS OF SCHOOL CHILDREN

Defects	New York	Baltimore	Philadelphia	Minneapolis
Defective teeth	74%	10.5%	1.7%	41.8%
Adenoids	39	5.3	1.0	14.8
Enlarged tonsils	46	11.1	4.5	27.6
Enlarged glands		1.6	0.23	49.6
Defective hearing and ear troubles	1	0.37	0.96	8.1
Defective vision and eyes	15	4.5	1.3	21.2
Pediculosis	0.4	4.4	2.0	12.1
Skin diseases			2.06	

All of these defects need attention. They may not be immediately serious but they place a great handicap on the child in his work, retarding his mental development, placing an effectual check on some attainments, impoverishing his body, and often driving him from school.

Pencils, books, and the public drinking cup, in the school are means of scattering diseases. The importance of the common cup to public health is generally recognised. Ten states have prohibited its use. Similar legislation is pending

in eleven other states. Twenty State Boards of Health, and as many city boards, have decried against it. In 1911, the New York City Board of Health prohibited its use in public place or institutions, hotel, theatre, factory, public hall, public school, railway station or ferry house.[10]

The germs of grippe, pneumonia, diphtheria and tonsilitis are carried in the mouth of many well persons. Examinations have proved this: 100 persons out of 4,250 persons examined in Massachusetts, 5 per cent. in Philadelphia, and 70 out of 1,000 in Minnesota carried diphtheria germs; 60 per cent. of catarrh cases in Boston showed grippe bacilli; and considerable evidence existed of the presence of germs of sore throat, pneumonia, bronchitis, and tuberculosis. Examinations of drinking cups reveal the accumulation of such germs. One cup in use nine days in a school contained not less than 100,000 bacteria on every square inch of the glass.

In the cities medical inspection of school children, along with a system of nurses to secure treatment in free clinics for the children where parents will not look after them, are solving the problem. The playground should also be mentioned as a factor.

The problem is a difficult one in the country. A comprehensive system of medical inspection has not yet been worked out for rural regions. It would seem that a system of travelling inspectors would be entirely possible, one for a given township or larger district for example. In several states progressive county superintendents have introduced the practice of supplying a rural school nurse who inspects the children, advises with teachers and parents, and recommends medical attention for serious deficiencies. Until some such plans are put into operation rural teachers must be their own inspectors. "Every rural teacher should know enough about children's diseases to discover by their outward signs the common contagions, and, acting upon this knowledge, place

[10] *Survey*, April 22, 1911, p. 146.

the patient under a physician's care. He should be able to detect the minor eradicable defects in pupils under his care, as, for example, enlarged tonsils, adenoids, and incorrect vision. Then he should be strong enough in his duty to insist that all such ailments be given immediate attention."

Ventilation, moisture, heat, and light are important matters in the school room. The one-room school house is generally built without much regard to these things. There should be plenty of light introduced from the back or sides of the room above the heads of the pupils. A jacketed stove should be used. An invention permits air to be taken from without, drawn up within the stove jacket, and distributed evenly throughout the room. The same device provides fresh air laden with moisture from outdoors.

The toilets and drinking water are other matters for control. What has been said elsewhere about securing sanitary conditions relative to these will apply here. But safety devices in the school are even more demanded than in the home. The water should be kept in the hall in a covered tank or cooler and drawn from a spigot into individual sterilised drinking cups. Where sewage disposal cannot be operated by the water-carriage system the earth closet should be resorted to, and provided with an automatic device for distributing the earth. There should be separate toilet buildings for the sexes, each provided with suitable seats for the children of different sizes. These buildings should be heated in winter if possible, kept clean, and inspected daily by the teacher, who should also prevent loafing and bad language in them.

REFERENCES TO DIVISION I

"United States Ethnological Report," Vol. XV.

W. I. Thomas. "Source Book for Social Origins," pp. 46–7.

"Weeds and Disease," Robert Hessler, M.D., *The Survey*, April 1, 1911, p. 5 ff.

"Cyclopedia of American Agriculture," Vol. I, Chap. 8.

"Report on National Vitality," Irving Fisher, p. 59.

"Report of the Secretary of Agriculture," 1910, pp. 31–32.

"Health Conditions in the Open Country," L. H. Bailey, "The Training of the Farmer," pp. 46 ff.

"Town and City," Introduction, L. H. Gulick.

"Exercise and Rest," L. H. Gulick, *Russell Sage Foundation Bulletin*, No. 76.

"Health on the Farm," H. F. Harris.

REFERENCES TO DIVISION II

"Rural Hygiene," Brewer, I. W., Dr., pp. 39–41, 63–4, 19–20, Chaps. 4, 8, 9, 11, 12, 16, 19.

"Sanitary Relations of the Milk Supply," United States Bureau of Animal Industry — Circular No. 111.

"Facts about Milk," R. A. Parsons, *United States Farmers' Bulletin*, No. 42.

"Year Book" of United States Department of Agriculture, 1907, p. 184.

"How Insects affect Health in Rural Districts," G. O. Howard, *United States Farmers' Bulletin*, No. 155.

"Report of Secretary of Agriculture," 1910, pp. 121–5.

"Sewage Disposal on the Farm," Theobald Smith, M.D., *United States Farmers' Bulletin*, No. 43.

"Modern Conveniences for the Farm House," E. T. Wilson, same, No. 270.

"Pure Milk Necessary to Health," Address before Fortnightly Club, Grand Forks, N. Dak.; "Sewage Disposal in relation to Typhoid Fever," *Bulletin* of the State Public Health Laboratory, Grand Forks, N. Dak., Gustav F. Ruediger, M.D.

"Sanitation and Water-Supplies," "Cyclopedia American Agriculture," Vol. I, Chap. 8.

"Sanitation of the Country House," H. V. Beashore.

"Proper Disposal of Sewage Wastes in Rural Districts," Julius Nelson, *Bulletin* No. 166, New Jersey Agricultural Experiment Station, June 27, 1903.

"Sanitary Conditions in the Home and on the Farm," Metcalf, *Bulletin* No. 89, South Carolina Agricultural Experimental Station, 1904.

"Distilled Water for Drinking Purposes," *United States Farmers' Bulletin*, No. 124.

"Milk, Butter and Cheese as Carriers of Infectious Disease," V. A. Moore, "Year Book," 1895, United States Department of Agriculture, 1431.

"Bacteria in Milk," L. A. Rogers, "Year Book," 1907, United States Department of Agriculture, p. 179.

"Changes Taking Place in Chickens in Cold Storage," Mary E. Pennington, same, 197.

"Hygienic Water Supplies for Farm," B. M. Bolton, same, 399.

Wm. E. Davidson. "Sanitation and Sewage Disposal for Country Homes," *Univ. of Mo. Bulletin*, Engineer Experiment Station Series, Vol. 1, No. 3.

REFERENCES TO DIVISION III

Brewer, I. W., Dr. "Rural Hygiene," pp. 51–71.

Faght. "The American Rural School," Chap. 14.

Ruediger, Gustav, Dr. "Medical Inspection of our School Children," *The University Bulletin*, N. Dak., November, 1910, pp. 3–11.

Dorset, M., M.D. "Invisible Micro-organisms," United States Bureau of Animal Industry,— Circular No. 57.

Ayers, L. P. "The New Attitude of the School Towards the Health of the Child," Russell Sage Foundation, No. 96.

Allen, W. H. "Civics and Health," Parts I and IV.

Gulick and Ayers. "Medical Inspection of Schools."

Devine, E. T. "The Waste of Infant Life," *The Survey*, Vol. XXIII, pp. 341–320.

Fisher, Irving. "Report on National Vitality," Chap. 8.

Terman, Lewis M. "The Hygiene of the School Child," an especially valuable volume.

CHAPTER XIV

MAKING FARM LIFE MORE ATTRACTIVE

Satisfaction the Object.— The title of this chapter suggests the motive of the discussion as the "depopulation" of rural districts, and the "back to the farm" tocsin. The popular conception is that the country population is to be saved from absorption by the cities by making farm life centripetal rather than centrifugal through increasing its inherent seductiveness. Hence make the farm attractive to keep the people from gravitating to the city is the prescription.

However worthy that conception may be, it is not the motive of this chapter. The country cannot hope to keep pace with the city in the adoption of the many utilities and attractions which give it charm and centralising power. Nor can it hope to escape the conditions which determine that relatively more and more persons shall dwell in the city with the advancement of agricultural production. Our purpose is to indicate, rather, how science and invention, in their application to the art of work and living, may be directed to the improvement of rural life because agricultural inhabitants have a right to the benefits of civilisation.

The material conveniences and utilities of the permanent population have much to do with producing satisfaction. Drudgery may come from hours which are too long, from a pace which is too rapid, and from having to carry on work under unnecessarily hard conditions. To see the heavier labour taken over by mechanical devices rather than being performed by men or even animals should be a cause of thankfulness.

The German sociologist Simmel states that the ideal of

society relative to the expenditure of human energy is to create machines that will do all the heavy work of the world. If man is capable of inventing mechanical devices to accomplish all the hard work, men may devote themselves to directing their energies. The decided tendency toward pushing machinery into every sort of work is predictive of the realisation of Simmel's ideal. It is emancipating the masses of labourers from that which can be but mere drudgery, and, it is to be hoped that farmers will cope with other kinds of producers in becoming master of things. Besides inventions of a larger nature there are numerous conditions and utilities through the adoption of which living may be greatly advanced. These lessen hardships, make health and life safer, and promote satisfaction and comfort.

A comparison of urban and rural modes of living shows that the former is vastly advanced beyond the latter. City people of inconsiderable means use conveniences which most farming persons would regard as luxuries, and as being possible only in cities. The explanation of this is found in the traditional and narrow view of life which the countryman takes. He is tightly bound by custom. What was the way of his father is good enough for him. An investigation made by the *Northwestern Agriculturist* illustrates this conservatism.

"Letters were sent out to 3,456 farmers in the Northwest, asking them several questions. When we tabulated the replies we got some startling facts. We found that less than three per cent. had modern lighting equipment in their homes. Fifty per cent. had wind-mills, while ten and one-half per cent. had water supply in the house. That is the difference between the farmer's cows and their wives. The one has water pumped for them, the other pumps the water themselves." [1]

As in the case of securing effective agricultural organisa-

[1] Address of P. V. Collins, *Wisconsin State Journal*, October 27, 1911.

tions much educational effort of an intense kind will be required to induce country populations to adopt newer and advanced modes of living.

I. FARM BUILDINGS

Much of the satisfaction to be derived from life in the country is centred in farm buildings. Most of the woman's life and a large share of that of man is spent in the dwelling. A considerable portion of the man's work and efficiency as a producer is connected with the barn and other outbuildings.

Principles of Construction.— 1. There are some general principles applicable to the construction and arrangement of farm buildings. These pertain to efficiency, arrangement, taste, comfort, convenience, and health. A good and proper building is one which secures the greatest efficiency in relation to the given surroundings for the least outlay. Where there are several buildings economy of time and energy can be gained by arranging them in their logical relation to each other, and by advisedly concentrating them. In some cases concentration under one roof may be found an advantage. Taste as well as economy should be applied in the construction of buildings.

"There is no abstract canon of good taste in farm buildings except that they shall be perfectly adapted to the uses for which they are designed and shall bear no meaningless or irrelevant parts or ornaments. Theoretically, the cylindrical stone silo is inharmonious in connection with farm barns; but because it serves a direct purpose, we accept it without question. If such a construction were added merely 'for looks,' it would be ridiculous."

Buildings should be constructed and fitted to yield the largest satisfaction. Because the health and sanity of man and beast are conditions of life, happiness, and prosperity, much effort should be given to making country life conditions sanitary.

2. Farm buildings should be carefully planned. Buildings which are not modern and therefore not adapted to present needs are a barrier. Capital is invested in them and consequently they are not likely to be torn down. They may be too small, inconvenient, poorly adapted to the demands made upon them, but they must be kept.

It is essential that the demands of present agriculture be met in providing barns and other buildings other than the farm-house. It is too much to expect that the average man can peer into the future and plan his buildings to meet coming changes. However, if he understands present conditions he is quite likely to be in line with future developments. A recent writer on eastern agricultural conditions says:

"A common measure of the supposed decline of farming is the fact that many farms can now be purchased for less than the buildings cost. This statement of itself does not appeal to me as having any special significance. A property is likely to sell for what it is worth, and this worth depends on its effectiveness as an economic unit or enterprise. Most of the buildings on these farms were erected a generation or more ago, when ideas of farming were radically different from those of the present day. The coming business of farming will demand a wholly new type of building in order to make the property effective, and we must overcome our habit of looking back to the time when the present buildings were erected. Barns and other business buildings that were erected fifty or sixty years ago should owe the farm nothing by this time." [2]

It is often the case that both houses and barns are built under an emergency. Unless possessed of ample means, so that contingencies may be provided for, the builder should be careful to design his buildings in such a way that they may be readily enlarged as needs arise, thereby economising money at the same time convenience is gained.

[2] Bailey, "The State and the Farmer," pp. 25–6.

II. IMPROVEMENT OF THE UTILITIES OF HOME AND FARM

The utilities of home and farm are important means of gauging the volume of the life of the inhabitants. In general, larger existence comes with the increase of opportunity for leisure and meditation, the lessening of drudgery, and the establishment of conveniences which make for comfort and health. All of these things may be called utilities. Their improvement is possible and manifestly desirable. Certain preconditions to this improvement exist and these will be dealt with first.

Preconditions: Motor Power.— Many of the economies, decrease of drudgery, and increase of comfort and health are dependent on the installation of a cheap and easily managed motor power. Some discussion of the different forms of motors is necessary to determine which is most available for farm use.

Steam, water, gas, hot air, electricity, and wind constitute the kinds of motors which are presented for the farmers' selection.

The comparative availability of the different kinds of power on the farm is determined by simplicity, demanding little special training for operation, and adaptability to the various kinds of work which is to be done by the motor. Special circumstances may determine which should be selected by a given farmer.

Wind and water may be considered the most available sources of power since nature provides them most freely. But water power may be said to be quite as expensive as most fuels, since it requires expense in the construction of the dam and in the installation of the initial machinery. However, after once installed it is cheap and useable, and if converted into electricity it may be made to do almost any service the farm requires.

Wind-mills are useable in certain regions, and through the

use of storage tanks, or if converted into electricity, by the use of storage batteries, the regularity of operation of their power is assured.

The development, storage, and utilisation of wind power is being subjected to scientific investigation by physicists. It is estimated that a coöperative 16-foot wind-mill and storage battery plant could be established for $2,027.50. This would include a small stationary gasoline engine to tide over periods of light winds, and would supply about fifteen families with light. A twelve-foot mill plant could be established for about $600. This would be sufficient to light the house and to furnish power for the machinery of the home.[3]

The gas engine depending on a producer is unavailable for average farm purposes because gas-producer plants are not successful for sizes less than 25 horsepower, nor for intermittent work. Besides the objection due to their size, large steam engines are too intricate and dangerous for common use.

The hot air engine is available only for pumping purposes. It is built to pump from 150 to 3,500 gallons per hour. Its advantages are stated to consist in its simplicity, usability of all sorts of fuel, ease of erection, and demand of unskilled attention.

Electric motors are becoming more available for farm purposes from year to year. A dynamo is required to supply the current and the dynamo depends on some engine for operation. Proximity to power stations, trolley lines, or cooperative establishments reduces expenditures and simplifies machinery. The power is cheap and offers the advantages

[3] "The Development, Storage and Utilisation of Wind Power," A. Hoyt Taylor, Ph.D., University of North Dakota Departmental Bulletin, March, 1912. Mr. Manikowske of Mooreton, N. Dak., has taken out a patent on a storage-battery charged by wind-power. He has applied this power to all the utilities about the barn and house. See "The Challenge of the Country"— G. W. Fiske, p. 80.

of being clean, safe, occupying small space, being instantly available, and usable anywhere with the extension of power lines. Several manufacturing firms are now building electric equipment for farm work. Besides the instances of use in the United States cited in a previous chapter, large farms in Germany employ it for thrashing and other indoor work, and to a limited extent for ploughing.

The automobile traction motor, as we saw, has been adapted to the needs of farm life. It is not only a good draft and carrying instrument but may be used as a stationary engine to drive machinery of the farm buildings or to furnish power for household purposes. For a jack-of-all-trades business it cannot be equalled. But its very ubiquity may be against depending on it regularly for certain important purposes. A supplementary stationary motor would furnish this regular and constant service.

Improvement of House and Household Processes.— It is not the province of this work to attempt to give the detailed description of an up-to-date yet modest farm home. Our purpose is rather to justify the creation of such a home and to indicate in a general manner how attainable and feasible it is.

A modern home in the city may at the same time be modest in size and price. Such a home would have the following improvements: a heating plant which might be any of the varieties of hot-air, steam, or hot water, or a combination of hot air and hot water; an inside toilet and bath room; a laundry as a separate and distinct room, however small; a well equipped kitchen with neighbouring pantry and ice-box; and generally gas or electric lighting. Such homes are owned or rented by families whose wealth and income would not compare favourably with those of the average farmer.

A heating plant is desirable because it is clean and therefore sanitary, regular in its operation, requires little attention, heats all parts of the house when needed without addi-

tional work, and keeps the first floor comfortable by reason of the fact that it is situated in the basement. Hot-air and hot-water systems are simple in operation and easily taken care of. Hot water and steam require some attention to prevent freezing and bursting of pipes and radiators, but no more than in city homes. A full concrete basement adds to the warmth, durability, and space of the house, affording space for fuel, and for ashes during the winter, if desired. It may also contain a fruit and vegetable cellar, and a laundry, when plenty of ventilation is provided. This is the general provision in very cold climates, but it would probably prove unsanitary in more southern regions.

On bath room and inside toilet facilities depends much of the health and comfort of the household, and more particularly the comfort and health of the women of the house. Bathing regularly during the colder parts of the year is a lost art, at least in many homes, yet it is absolutely requisite to cleanliness of person and to physical efficiency. The fact that many persons have grown old in spite of its omission does not demonstrate its uselessness. Health and regularity of habits are conditioned by the comfort and convenience of toilets. Much constipation with all its attendant and consequent complications arises out of irregularity of habit which is brought on by neglect. And the neglect arises from outdoor, exposed, and often filthy toilet conditions.

The bath is made possible by the establishment of motor power. In case the earth is too flat for drainage purposes the bath and toilet may be drained into a flush tank which holds the sewerage during twenty-four hours. This is drained automatically into the soil previously prepared for oxygenation and sterilisation. A sanitary chemical toilet is now on the market and is installed in many small rural hotels. Its sanitation is dependent on attention to cleaning and to supplying the chemicals.

A separate laundry is very desirable. It conduces to

efficiency because it is specially constructed and equipped for its purpose. It economises the space and work of other rooms by leaving them unobstructed with washing appliances. It is sanitary and healthful because it takes care of the fumes and wastes apart from the remainder of the house. Its construction and provision is no more difficult than that of any other room or farm improvement.

The well planned kitchen, with its pantry adjoining, or with pantry shelves located in it, and with its ice-box in a neighbouring vestibule or specially prepared room, is a labour- and mind-saver to the housewife. Scientific management, which is now being applied to labour, is scientific because it makes the conditions under which the work is performed such that steps and movements are reduced to their minimum, and the load is adjusted to the bearer. If anywhere in the world this principle should be applied to the kitchen. The articles and utensils to be used many times a day should be so placed relative to the user and to each other as to call forth the fewest movements, and the least effort.

Sanitary provisions for the care of foods is likewise highly desirable in equipping the kitchen. The ice-chest or refrigerator is extremely serviceable in accomplishing this end.

A lighting system, either gas or electricity, is now available for farm homes. Either gasoline or acetylene plants may be constructed at reasonable expense and the home may be furnished with as good lights as are city homes. In fact many city homes establish private plants because they secure better and more economical lights than the public systems give. The care of lamps, danger from explosion, inconvenience of carrying them from room to room as well as of lighting, the unhealthful odours they create, together with a poorer quality of light, are avoided by installing a lighting system. In case there is a motor electric lights may be easily installed and possess obvious advantages.

Certain kitchen improvements and devices are to be viewed as necessities rather than as incidents or luxuries. A task is done inefficiently and uneconomically when it unnecessarily depletes the worker. The farm woman's life is hard enough at best. There is enormous work to be done and labour-saving devices should be installed wherever possible.

With a motor plant to furnish power the water can be carried to its place of use and slops disposed of by means of pipes; washing machines, wringers, churns, sewing machines, and separators run by bands connected with the source of power; and even electricity and gas may be used in cooking and ironing.

The processes of housekeeping should be based on the principles of household economics. Woman's sphere in rural life would be vastly improved by training women in those principles. Not only the ease of performance but the satisfaction derived in conducting the household along scientifically effective lines would be increased. Above all, since food is the foundation and support of life the scientific preparation and preservation of foods would conduce much to their efficiency in building up working ability. A knowledge of furnishings for the house will promote good taste and economy. The application of good sense in the selection of the finish and furniture of the house would serve to make housekeeping less burdensome. What some one speaks of as the elimination of "dust lines" is an example of this. If all the meaningless mouldings and panels, curved mop-board, and so on, were excluded the work of dusting would be immensely reduced.

House-cleaning is now being done by machinery in an easier and more sanitary manner than was possible by the use of broom and dustpan. The suction or vacuum cleaner run by motor power draws the dust out of floor, carpets, rugs, and from walls without scattering germ-laden dust in the air to

pollute and infect the throat and lungs. Hand-power vacuum cleaners of different designs and prices are giving large satisfaction.

Improvement of Out-of-Door Work.— We have considered this feature of farm life from the business side. Now we want to view it in its relation to the intensification of satisfaction and to the reduction of the element of superfluous drudgery, because the latter obstructs enjoyment and creates aversion to farming. The drudgery of farm life is commonly given as a motive for rural emigration, and while we are not advocating the adoption of agricultural improvements merely to lessen this emigration, it is worth considering as a factor in securing rural advance. It at least reveals one sore spot in country economy.

No doubt the whole matter of improving the business of farming could be viewed as a splendid means of advancing satisfaction in rural living. Accurate records and accounts must yield the joy of assurance to the manager that an exact knowledge of the conditions of a business always produces. Science carried out in soil fertilisation and in plant and animal breeding and culture must yield a strong intellectual stimulus and help satisfy the psychic cravings and ideals. And in like manner there is a joy which arises from executing work by the mechanical devices which utilise the great forces of nature and perform with exactness and speed the allotted task. But our particular note here is that the adoption of artificial contrivances of an advanced but approved type enhances the life of the farmer by reducing the expenditure of human energy.

The following particulars will serve to indicate some ways in which machinery may lighten the farmer's tasks. Riding devices propelled by horses or motors exist for ploughing, harrowing, disking, seeding, harvesting, and cultivating. Only small farming or trucking, where very intensive cultivation is carried on, demands much walking and hand labour.

Pitching is done by hay loaders and forks worked by power. Indoor work such as shelling, fanning, separating milk, pumping water, and chopping feed may be done by motor attachments, as we have seen. Threshing is carried on by machinery wholly and by the application of self-feeders, bundle carriers, automatic measures, and pneumatic stackers has become a more cleanly and agreeable task. Pitching bundles in the field, like shocking bundles in harvesting, seem open for inventions. Shovelling grain entails much hard labour which it seems might be obviated by the adoption of mechanical devices. If granaries were constructed with an elevated drive for dropping grain into the bins, and if the floors of the latter were raised sufficiently to permit chutes carrying the grain into wagons, gravity would do the work.

Milking may be done by means of pneumatic milkers which are said to operate satisfactorily but are most available where there are several cows to milk. Cutting corn for the shock by hand is obviated by the corn or fodder cutter. Much of the arduousness of choring could be reduced by a happy arrangement of the barn and the grouping of out-buildings so as to save steps and the handling of feeding material.

Farming might almost become a sedentary occupation with the use of machinery. By its intensive employment farm life would be made more enjoyable for the worker and the growing boys and girls would have proper time for recreation and sports.

Some improvement of life by the regulation of labour is possible. A distribution of farm industry over the whole of the year, thus preventing a seasonal rush, is desirable. This is especially true of the more northern climates. Seeding, harvesting, and threshing times are periods of great labour stress. The days are lengthened and the pace is likely to be rapid. With a one-crop system this is inevitable because the areas cultivated must be large and both safety and completion demand concentration of labour energy into a

very few days or weeks. The natural corrective for this is to be found in a diversification of farm industry, the carrying on of animal and poultry culture, of dairying, and of plant and grain culture; and the adoption of several crops which are seeded and mature at different times.

This diversification would have to be exercised with caution, however, for to carry it to great lengths would demand a large investment in numerous kinds of machinery and each might not be used enough to justify the absorption of the capital.

III. IMPROVEMENT OF GROUNDS

Justification.— Several motives exist for giving attention to the home grounds. First, there is the individual satisfaction which arises from a love of the beautiful and pride in comely surroundings. Much discontent with farm life is produced by unattractive and barren features of the homestead and landscape. This is particularly true where nature is niggardly in supplying variety. Level plains without trees are apt to seem monotonous and dreary, especially in the long winters of northern regions.

Second, a satisfaction in the appearance of the countryside as a whole, and even a sense of duty in improving the landscape view, are involved. "It is everybody's concern how the neighbourhood looks. One slovenly place is a blot on the neighbourhood. The scenery is one of the assets of a country; and the appraisal of this asset is bound to increase with time, because the educated mind is always sensitive to its surroundings. Any person who needlessly or ignorantly despoils the scenery is guilty of an offence to the community, whether so recognised by law or not." [4]

As in the city, one unkempt home or farm mars the beauty of the whole community. It is desirable that there shall

[4] *Farmers' Bulletin*, U. S. Dept. of Agr., No. 185.

arise a public conscience which will make it an offence to offend a neighbour's eye as it is now to offend his purse.

Third, protection is afforded by certain kinds of beautification and improvement. This is a large element where nature has made no provisions. Where neither elevation nor forests occur and storms of wind and cold sweep over the levels, protective barriers become almost a necessity. The blizzard, the sweeping dust, snow, and rain, the venom of cold and the torridity of sun all may be tempered by the intervention of artifice.

Agencies.— The agencies and methods of securing æsthetic results in the country must depend on the character of the region, climatic conditions, interest, ability, the financial means of the individual proprietor, and the coöperation and ideals of the community. Rural art is not only negative, consisting in the removal of offensive objects; but positive and constructive, consisting in laying out highways, farms, fields, and home grounds in such a manner as to appeal to the eye.

In the " Cyclopedia of American Agriculture " is presented contrasting views of countryside landscapes. In one, no attention has been paid to looks. Fields are irregular and farms are without perspective. Fences and buildings are slatternly, roadsides unkempt, and natural attractions undeveloped or marred. In the other, order, proportion, chaste cleanliness, and regard for beauty prevail. Fields are regular and are ordered relative to each other. Roads, fences, and buildings are well kept. Attention has been paid to directing the highways through attractive surroundings. Natural objects are given a chance to display themselves. The contrast is striking and impresses the spectator with the value of improving the larger aspect of rural regions.

The chief methods of securing æsthetic ends in the construction of home grounds is such an arrangement of drives, trees, shrubs, and lawns as to realise satisfaction and protection. Even if the grounds are relatively small these results

may be secured by careful planning. In the northern regions, where grass and leaves are in retirement during the larger part of the year, it is desirable to set out with other trees such conifers as the Scotch pine, whose annual growth equals that of box or green oak.[5] In summer the effect is one of contrast to the other trees and growing plants; in winter by retaining their leaves they carry with them an expression of life and warmth, and when draped in snow and ice the long graceful branches of pines and spruces lend a decided charm. The massing of shrubbery of several different varieties secures contrast in verdure and colour, suggests protection and warmth, or may serve as a covering for an unsightly building or feature of the landscape. The smooth, thickly grassed lawn is always a delight, and by the addition of shrubs and trees, providing the area is not too restricted, its attractiveness is greatly enhanced.

REFERENCES

Bailey. "The State and the Farmer," pp. 25–26.

"Farm Buildings and Fences," "Cyclopedia of American Agriculture," Vol. I, pp. 231 ff.

"Rural Art," Ibid., Chap. 9.

"Industrial Alcohol: Uses and Statistics," H. W. Wiley. *Farmers' Bulletin*, U. S. Dept. of Agr., No. 269.

"The Use of Alcohol and Gasoline in Farm Engines," C. E. Lucke and S. M. Woodward. *Farmers' Bulletin*, No. 277.

"Industrial Alcohol: Sources and Manufacture," H. W. Wiley. *Farmers' Bulletin*, No. 268.

"Practical Suggestions for Farm Buildings," George G. Hill. *Farmers' Bulletin*, No. 126.

"Modern Conveniences for the Farm Home," Elmiria T. Wilson. *Farmers' Bulletin*, No. 270.

"The Meteoric Rise of the Automobile Industry," E. M. West. *American Review of Reviews*, November, 1910, pp. 581–592.

"Forest Planting on the Northern Prairies," James M. Fetherolf, U. S. Dept. of Agriculture, Forest Service Circular No. 145.

"Beautifying the Home Grounds," L. C. Corbett. *Farmers' Bulletin*, No. 185, and "The Lawn," same, No. 248.

[5] See Circular 145 of the Forest Service, U. S. Dept. of Agr.

"From Kitchen to Garret," Virginia T. Van De Water.

"Home Waterworks," C. J. Lynde.

"Electricity for the Farm and Home," Frank Koester.

"Rural Improvement," F. H. Waugh, chaps. 4, 8 and 10.

"The Development, Storage and Utilisation of Wind Power," A. Hoyt Taylor, Ph.D., Univ. N. Dak. Departmental *Bulletin*, March, 1912.

"Plants as a Factor in Home Adornment," J. C. Corbitt. Reprint from "Year Book" of Dept. of Agriculture, 1902.

"Lawns and Lawn-making," F. Lamson. *Scribner*, Reprint from "Year Book" of Dept. of Agriculture for 1897.

"The House," Vol. I of the "Library of Home Economics"— chiefly for city dwellers of large means. Chicago.

Parloa, Maria. "Home Economics." Century Co.

"New Life on the Farm," C. M. Hosge. *Outlook*, April 16, 1906, p. 841.

"Farm Boy Who Went Back," H. Gard. *World's Work*, 20:13445–9.

"Human Factor in Rural Life," H. Plunkett. *Outlook*, 94:354–9.

"Making Country Life Interesting." Ind. 68:59–60.

"New Farming Generation." Ind. 68:276–7.

"New Life on the Farm," C. M. Harger. *Outlook*, 94:841–4.

"Use of Electricity in the Country," A. C. Lant. *Colliers*, 45:24.

"What the Motor Vehicle is Doing for the Farmer," W. Langford. *Sci. Am.*, 102:50–1. Ibid., *American Homes*, 7:267–9.

CHAPTER XV

SOCIALISATION OF COUNTRY LIFE

Meaning of Socialisation.— Socialisation commonly refers to the historical process of developing in individuals the associational ability. This does not mean that man ever was inherently individualistic in his constitution. Man as man probably never was unsocial, since he was evolved from animals below him which were social.

It does mean that, viewing society as a developing organisation, becoming more and more complex in its mechanism and requirements, man has had to be trained and disciplined by an age-long process into fitness to work in and through this mechanism. It involves the spirit of response, the power of sympathetic coöperation, and an intellectual and technical capacity to stand the strain of responsibility.

The difference between primitive and civilised man lies less in the difference in their original inherent physical and psychical capacity than in the fact that the modern man has the advantage of an improved social mechanism which offers opportunities and possesses great elasticity in making response. Growing up in the midst of a more highly developed social medium, and surrounded by its richer atmosphere, he is enabled consequently to take deeper draughts of wisdom and experience.

Socialisation as applied to objects and institutions consists in reconstructing them and making them amenable to the uses society demands. Institutions may become so conservative that they stand still. They may come to act as veritable obstacles to the advancement of other social institutions and of life. Thus creeds and beliefs, churches and schools, have

to be considered with reference to the changed epoch and new demands, and reconstructed to meet the new conditions.

The meaning remains essentially the same when we refer to the socialisation of a community. If a neighbourhood is in question it may be found to be backward. Some of its institutions and modes of life may require reconstruction or elimination. Or it may need socialisation because it lacks altogether one or more institutions or modes of life which have come to be regarded as in some way necessary to the age and to completer living.

The point of view lies back of institutions and processes. Things remain as they are because the views of people who maintain them do not grow. The transformation of institutions, beliefs, modes of doing things, and customs involves the preparatory work of recasting and revolutionising the ideas of men relative to those things. The socialisation of a community involves revolutionising its citizens' minds relative to its institutions and utilities. They must be so changed in their views that they will not only permit but demand that modern needs shall be met by this work of reconstruction.

We have already treated certain phases of the socialisation of rural life. We have considered socialisation in pointing out the improvements which are necessary in the material and business processes of farming so that they shall be adequate to the demands of this age; in denoting desirable improvements of the house, the buildings, and the grounds; in treating the application of labour saving devices to the work of farming; and in indicating the demands which a wholesome rural life must make on the size of the farm, the condition of ownership or tenancy, and the status of labourers. Our present undertaking requires a similar consideration of the conditions and factors which are directly bound up with associational matters.

The Fact of Backwardness.— 1. General recognition of so-

cial backwardness of country. Whether or not rural social life is barren over and above the emptiness of the city, the consensus of opinion lies in that direction. That this contention is not entirely empty may be concluded by the testimony of people either closely acquainted with farm life or of those actually living on farms.

"In a recent study of life in the country and small towns, one of the striking conditions brought out was the lack of sufficient social life. Particularly significant is the fact that this complaint came, not from outsiders—chance visitors or professional investigators; it was the direct testimony of the men and women living on the farms and in the small towns. The same statement came from people living in all parts of the Union—from New England districts, where there are many old village communities and farms comparatively close to one another, as well as from the more isolated Southern plantations and Western ranches." [1]

2. The cityward tendency. The "drift to the city" constitutes a fact in evidence of country social hunger. While we must remember that the fundamental forces or conditions which transfer populations from country to city are of an economic nature, yet there is a large conscious element in the shape of desires and cravings after the pleasures and satisfactions which are supposed to arise from the social solidarity and associational opportunities offered in urban aggregations.

3. Social and cultural dearth. A meeting in the corn-belt was called to discuss the condition of country life of the region. "The common testimony was that there was nothing wrong with the region. The farmers were prosperous, owned automobiles and good turnouts, had money in the bank and were bank directors; land was considered a good investment; farmers were able to move to town at fifty years of age."

[1] "Neighbourhood Entertainments," Stern, p. ix.

Being asked why they desired to move to town, the answer was, "to secure good school facilities, to escape bad roads and isolation, to have church privileges and to be able to enjoy social advantages. In other words, the country life of the region was successful only on its business side, and a satisfying rural society had not developed. The town was a centre of interest. The country was not sufficient unto itself as a permanent place of abode." [2]

From replies to questionnaires sent to college students in the East and in the West is found corroborative evidences of the statement that country life is considered barren by those who are turning from it to fit themselves for another sphere.

A comparative survey or exhibit of the social possibilities and resources of a country and a city district would further the opinion. It would be discovered that the rural district is deficient in buildings and institutions which are the means of promoting social intercourse; and that separation of families from each other and the difficulties encountered in getting together are of a nature to prevent frequent assemblies.

The difficulties of rural assemblage is illustrated by an incident which occurred in a northern region. A new school building was to be dedicated. Three attempts were made. Local circumstances cancelled that in October, a blizzard, that in February, and a furious wind, rain, and hail storm nearly spoiled the final attempt in May. Only a few farmers could get in to the meeting. When the programme was over people were heard to exclaim, "Thank goodness, it is over at last!" That community will probably not undertake another such event for years.

4. Source of rural social backwardness. There is no scientific foundation for the inclination to regard the farmer as a different sort of being from the urbanite. If, as we have seen, the primitive man is essentially like civilised man

[2] Bailey, "The Training of Farmers," pp. 15–16.

in mental structure, it is beyond belief that farmers should be fundamentally dissimilar to men of other occupations and conditions of life in that respect. Ethnologists explain the apparent difference in the abilities of the former by the dissimilarities in their cultural conditions. In like manner we must believe that rural conditions stamp upon the agriculturist one characteristic impress, while those of the city imprint upon the city dweller another.

There is a social heredity in rural life which helps explain his social aloofness and backwardness. Every occupation has certain modes of reaction which are characteristic of its votaries. A trade group has certain terms, phrases, ideas about the trade and about its technical processes and instruments which are its peculiar possession. Its members have a stock of these items on hand which they pass down from generation to generation. If the group lives apart from other groups it is also likely to develop certain beliefs, traditions, customs, ways of regarding life and nature, and views about social matters which are somewhat peculiar to itself. The conditions imposed upon it and under which it lives account for these characteristics.

In like manner the aloofness of the farmer from other occupational groups and from other farmers predisposes him to depend on himself for passing the time, and to an absence of a strong social hunger. Moreover the absence of meeting places and of associational helps in the way of organisations places a premium on his dependence on self and family for enjoyment and entertainment.

Desirability of Associational Life.— We might assume, without discussion, that in the country associational life is highly desirable. The infrequent unsocial individual, and the intellectually self-centred and independent person, the product of years of cultivation and education, are about the only ones who might dispute it.

Associational life which satisfies the craving for the pres-

ence of others and of intercourse with them is useful to the individual and to the community.

First, it is desirable in itself. It quenches a social thirst and hunger which are as genuine and at times almost as imperative as physical thirst and hunger. As water and food not only satisfy the physical craving but build up the physical organism and replenish its vitality, so friendly intercourse furnishes a delight and satisfaction which are hardly surpassed by other satisfactions. In doing so they are creative of personality and of a larger and more wholesome life. Civilisation consists in increased wants and their satisfaction. It is in essence an expansion of the fundamental want of mere existence by differentiating and developing that want as other wants.

Second, it is desirable in that it serves as a means of securing other ends.

(a) By means of association coöperative activities are promoted. A coming together for purposes of planning, discussion, and organisation is found to be quite necessary. The greatest industrial and commercial organisations of our time are promoted by a meeting together of interested parties for advice and formulation. Lesser associations and organisations best exist and prosper where people meet from time to time to talk things over. They generate the initiative and personal interest as well as the understanding which nourish and promote them.

(b) By means of associational intercourse the cultural process is expanded and intensified. Contact between peoples has always been found necessary to acculturation. Provincialism is broken down by migration and social mixture. Prejudices are dissipated. Ideas are multiplied and made to do service for many as against the few. What contact is between peoples intermingling is between individuals of a neighbourhood. Suggestions take root and grow. Better ways of thinking and acting come to light. The brighter

minds lead and educate the more backward. Something of the elevation of larger views becomes the heritage of all.

"When a district ceases to be a mere collection of householders and rises to the dignity of a community with common interests and common aspirations, it becomes alive; and the 'monotony' of country life becomes largely a thing of the past. One achievement fosters another, and unexpected potentialities are awaked. We need the stimulation of our kind for our own better development. There is a species of provincialism and a lack of varied interest in city as well as in country life; but it lies with the community in either place to determine whether such conditions shall remain." [3]

(c) Association promotes recreation. Recreation is, as its name denotes, a renewal of life. Isolated persons have a tendency to grow old young and to lose their youthful sporting tendencies. So long as people can play at something, or can feel a freshness and virility return by means of certain activities, they remain youthful and vital. Rural life stands in need of recreation. It needs to learn how to play, how to keep playing for the sake of play, how to get rid of loneliness and weariness by games and amusements. The annual circus at the county seat, the yearly fair, the funeral, and the occasional church service are not enough. The weekly occasion is in demand where the play instincts may be set at work to orderly riot and where fun and mirth may abound.

Especially for country children organised play is needed. The playground movement has had an immense growth in the cities during the past few years. It means organised and directed play activities. Let us notice the deep nature and demand which exists for play.

Historically, play of the associated sort is older than humanity. Animals play. The young members of a given kind engage in movements in their play together which an-

[3] Stern, "Neighbourhood Entertainments," p. 26.

ticipate activities of later life. They are, therefore, both imitations of the actual life movements of the older animals and a preparation for engaging in those life operations later on.

The physical effects of play are marked. It is almost a necessity to growth. Especially a symmetrical development of the body is secured by games which put the various parts into use. It is said that the Jews of East End London are three inches shorter than the wealthy members of the race of that city. Much of this difference is thought to be due to an absence of opportunity to play and to engage in games on the part of the poor. In similar manner the slum population of Glasgow is four inches shorter than the Scotch of country regions.

Mentally, organised play is valuable. The power of imitation is promoted. The quality of alertness to what is taking place and of being ready to anticipate it is developed. Foresight is thus cultivated, as also by planning to overcome the other contestants. A comprehension of plans and minutiæ of games, in order to play them well, enlarges the understanding and teaches the nature of organisation. A premium is placed on initiative and the leader is trained for future activities. The social worth of associated and directed play is paramount. Games place a premium on organisation and their value for attaining the accomplishment of purposes is seen. They teach coöperation. There is no success for the players' team unless all its members subordinate themselves to the group and work together. The value of the group and a regard for it is thus inculcated. Altruism is promoted and selfishness curbed. Zeal, enthusiasm, and devotion to a cause is engendered. Love of association and community spirit are other no less worthy qualities which are attained by means of games.

The country child is as much in need of having most of these qualities developed as the city child. He has the same

need of a symmetrical growth of body. He is probably as strong, or stronger, and heavier than his colleague of the city; but he lacks the poise and proportionate development which the latter possesses. An investigation was made of the height, weight, and head circumference of country and city boys and girls of North Dakota. Children of the age of 12 in rural and city schools were measured. The data for the two groups are presented in the accompanying table (Table 21). The number measured in each case is small and the results are therefore not decisive. But they are interesting and indicate the country child is larger than the city child.

TABLE 30

PHYSICAL DIFFERENCES BETWEEN RURAL AND CITY CHILDREN

RURAL

Sex, Age	Number	Height	Weight	Head Circumference
Male, 12	19	58.9	86.1 lbs.	21.34
Female, 12	11	57.11	82.2 lbs.	21.34
Average	30	58.25	84.6 lbs.	21.34

CITY

Sex, Age	Number	Height	Weight	Head Circumference
Male, 12	20	56.5	80.7 lbs.	21.27 in.
Female, 12	20	57.77	80.47 lbs.	20.97 in.
Average	40	56.9	80.58 lbs.	21.12 in.

It is stated that it was found by Civil War and Spanish War officers that city bred troops were quicker to follow orders and were able to endure more hardships than country men. Recent tests in gymnastics of this country tend to indicate just the opposite as to endurance. "While in the

sprints, the inability of the country boys to get a quick start acts as a serious handicap, in the longer races, they maintain a more regular pace and manifest greater endurance than city boys, even when there is a demand made upon the will to key up the muscles to a last supreme effort." [4]

Country boys lack coöperative ability and power to coordinate the organs of their body as compared with city boys. Mr. Myron T. Scudder found not only that country boys "did not know how to play, but that when they did try their physical development was neither as high nor as even as that shown by the boys in the Public School Athletic League of New York City." [5]

Farm labour does not take the place of organised play. Indeed, there is reason to think that child labour on the farm is in many cases open to extreme severity and abuse. Boys are often put at tasks far beyond their age and powers, and kept at work far beyond the ten-hour period of adult industrial labour. Compulsory education laws do not always protect the child. A North Dakota County Superintendent instructing a body of rural school directors advised them that the state school law might be violated in his county. It is understood that similar leniency exists in other states.

The social needs of the country child for organised play are paramount. He craves this form of recreation. His future social nature and coöperative ability are largely dependent on it for their development. He has a right to this recreational pleasure, and stern justice and the responsibilities which later he is to carry demand that it shall be extended to him.

(d) Associational life is desirable to bring about a social solidarity. A community exists only where common interests are recognised and acted on. We speak of a neighbour-

[4] Guy D. Gold, "The Psychology of the Country Boy," *Rural Manhood*, April, 1911, p. 108.

[5] Stern, Chap. 1, and Gold, *op. cit.*, p. 107.

hood and probably mean by it that in a given region people live on farms which lie side by side. A neighbourhood is more than that. It is a community or it is nothing at all. If people do not neighbour with each other, if they do not recognise their mutual interests and draw together along those lines, there is no neighbourhood and no society.

Social solidarity is good as a means and it is good as an end. As an end it enlarges personality. Our persons are as expansive as the interests they circumscribe. Personality is built up by absorbing the ideas, sympathies, interests, points of view, habits of reaction, methods of adjustment, etc., of our fellow men. So the child's person grows. As we grow older we continue the process. To cease to drink in and give out is to stop the development of our personalities. Hence the enrichment of the personalities of any given region is dependent on a frequent and close give and take between the individuals of the district. Family life is a means to this end. Large families in the country might be justified to secure this end. But the development of the associational life of a considerable number of families is a further and necessary means to secure richer and larger results.

As a means, social solidarity is a factor. The historic devices which have been used to generate it is a recognition of its value. Among these in primitive times was the idea of blood relationship, and in more developed times patriotism. The ties of blood held groups together when humanity was in its childhood. It was intensified and encouraged by ideas of tradition and religious sanction. A premium was placed on preferring the individual of a blood group rather than one of a foreign group. Outside groups were anathematised, ridiculed, hated, destroyed wherever possible. The group kept its identity, promoted its life, and evolved by this device.

Patriotism serves this purpose to-day. Nations are considered strong, other things being equal, in proportion to their patriotism. The Japanese surprised the occidental

world by their exhibition of absolute devotion to their country's cause in the Russo-Japanese War. No danger was too great or death too dreadful for Japanese troops to meet. We promote patriotism by flags, songs, exercises, appeals, boasts, because it secures a unity of spirit and a devotion which makes the nation strong and inviolable. What blood-ties were to primitive men and patriotism to modern states local pride and devotion must be to country neighbourhoods. They will be strong, vigorous, alert, able to survive and to develop by their means.

Direction Rural Socialisation Should Take.— A unanimity of opinion does not exist, among students of rural matters, as to what direction the socialisation of the country should take. Shall it follow the lines developed in the city or build its own? Shall it be mere imitation of city ways, a wholesale borrowing of organisations, or will it be best to adopt and reconstruct those factors for its own peculiar conditions? Can the country be citified, and is it best it should be, or must it build up a real life of its own which shall not be a pale copy of life that is built on different foundations?

It will be worth while to consider the suggestions which have been made by men who have a knowledge of rural matters.

First, some would have the farmers gathered together in small villages after the manner of European agricultural life. Says President Kenyon L. Butterfield of this opinion:

"This remedy, however, is of doubtful value. In the first place, the scheme is not immediately practicable. About three and one-half billions of dollars are now invested in farm buildings, and it will require some motive more powerful than that inspired by academic logic to transfer, even gradually, this investment to village groups. Moreover, it is possible to dispute the desirability of the remedy. The farm village at best must be a mere hamlet. It can secure for the farmer very few of the urban advantages he may

want, except that of permitting closer daily intercourse between families. And it is questionable if the petty society of such a village can compensate for the freedom and purity of rural family life now existing. It may even be asserted with some degree of positiveness that the small village, on the moral and intellectual sides, is distinctly inferior to the isolated farms."

Second, better means of communication are recommended to secure needed rural social conditions.

"At the present time rural isolation in America is being overcome by the development of better means of communication among farmers. So successful are these means of communication proving that we cannot avoid the conclusion that herein lies the remedy. Improved wagon roads, the rural free mail delivery, the farm telephone, trolley lines through country districts are bringing about a positive revolution in country living. They are curing the evils of isolation, without in the slightest degree robbing the farm of its manifest advantages for family life. The farmers are being welded into a more compact society," given greater alertness of mind, and the basis is being laid for larger social activities. "The problem now is to extend these advantages to every rural community — in itself a task of huge proportions. If this can be done and isolation can be reduced to a minimum, the solution of all other rural social problems will become vastly easier." [6]

Roosevelt attributed rural exodus to "loneliness and lack of mental companionship," and hoped that free delivery, telephone, bicycle, trolley, etc., would do much toward "lessening the isolation of farm life and making it brighter and more attractive." Many think just the reverse will occur. They will make the city more accessible and spread information about it and its seductive attractions which may increase the urban immigration. Anyway the city will develop more

[6] Butterfield, same, pp. 20–22.

rapidly in material advantages than the country and widen the breach, rather than be overtaken by the country through its urbanisation.

Still others take a rather pessimistic view of the effects of rapid and easy communication which will put the country in close touch with urban centres. The chance and hazard-taking habit is one of the dangers of mankind. "Already those miraculous agencies in the hands of cities, that destroy alike space and time, are visibly instilling the virus of their many evil customs and methods into the various industries diffused throughout the nation, hitherto exempt from them. Even now, the entire rural element of the country is being closely and intimately linked to the chance-taking centres of the nation. It is, therefore, even at the present time, no unusual circumstance for the farmer to leave his plough in the furrow, and with it his honest labour, and repair to the well-installed telephone in his own home, to enjoy the thrill of a venture in the wheat pit of Chicago or the stock-market of New York."

The result will be an "incongruous medley of honest creative effort and speculative venture. The daily routine of the farmer's life may thus ultimately become a round of rapid alternations between the ticker and the plough."

Realisation of the danger may be obtained by remembering that the farmers are more intimately connected with chance-taking centres than were their forefathers who lived in the cities where the dangerous foci are centred.[7]

Third, very effective reasons are given why the country should build its own institutions and civilisation. "The country must develop its own ideals and self-respect. My city friends, for example, are proposing ways whereby country people may have entertainment, but they make the fundamental error of fashioning their schemes on city ways. The real countryman does not think of theatres and recitals and

[7] Bookwalter, "Rural versus Urban," pp. 279–81.

receptions and functions in the way that the city man does, and it is not at all necessary that he should. On the contrary, it is very important that he should not. The countryman needs more social life, but his entertainment and contentment must come largely out of his occupation and his contact with nature, not from mere extraneous attractions." [8]

"I will illustrate this by speaking of the country movement to revive sports and games. More games and recreation are needed in the country as much as in the city. In fact, there may be greater need of them in the country than elsewhere. The tendency seems to be just now, however, to introduce old folk-games. We must remember that folk games such as we are likely to introduce have been developed in other countries and in other times. They represent the life of other peoples. To a great extent they are love-making games. They are not adapted in most cases to our climate. To introduce them is surely to bring in another exotic factor and to develop a species of theatricals." [9]

Country life cannot be effectively improved by grafting on city ways. It cannot hope to rival the advantages of the cities. Cheap and garish entertainments, electric lights, advertisements affording nightly displays of fireworks, public spectacles and meets of great magnitude, institutional churches, social settlements, play-grounds and social centres as separate institutions can not be expected to thrive in rural regions and meet their peculiar necessities.

"In a properly organised rural neighbourhood could be developed that higher kind of attraction which is suggested by the very word neighbourhood. . . . When people are really interested in each other — and this interest comes of habitually working together — the smallest personal traits or events affecting one are of interest to all. The simplest piece of amateur acting or singing, done in the village hall by one

[8] L. H. Bailey, "The State and the Farmer," pp. 64–65.
[9] Bailey, "The Training of the Farmer," pp. 8–9.

of the villagers, will arouse more enthusiasm among his friends and neighbours than can be excited by the most consummate performance of a professional in a great theatre, where no one in the audience knows or cares for the performer."

Fourth, the country stands in need of developing its own permanent leadership. Elsewhere the evidence relative to this need is given. In earlier chapters mention has been made of it. The dependence of farmers on other classes for political direction and initiative has been shown. Statesmanship of a large sort comes from non-rural classes. Especially home ability must be grown which shall understand rural conditions and communities as such. It must appreciate the deepest social necessities and demands and be constructive in its attempt to devise ways to satisfy those conditions.

REFERENCES

Stern. "Neighbourhood Entertainments," Introduction, p. ix; and Chap. 1.

Roosevelt, Theodore. Accompanying message to "Report of the Country Life Commission," p. 6.

Bailey, L. H. "The Training of Farmers," pp. 8–9 and 15–16; "The State and the Farmer," pp. 64–65.

Gillette, J. M. "Vocational Education," pp. 6–7.

Blackmar, F. W. "Elements of Sociology," Bk. III, Chap. 1.

Mangold. "Child Problems," Book II, Chap. 1.

Groos, Karl. "The Play of Animals," Introduction, and Chap. 1.

Gold, Guy D. "The Psychology of the Country Boy," *Rural Manhood*, April, 1911, pp. 107–8.

Butterfield, Kenyon L. "Chapters in Rural Progress," pp. 20–22.

Bookwalter, John W. "Rural Versus Urban," pp. 279–81.

Plunkett, Sir Horace. "The Rural Problem of the United States."

"Country Life Problem." Editorial — *Nation*, Vol. 89, pp. 479–80.

"Making Country Life Attractive." *Independent*, Vol. 68, pp. 59–60.

CHAPTER XVI

RURAL SOCIAL INSTITUTIONS AND THEIR IMPROVEMENT: CLUBS

In previous connections, especially in the last chapter, we have seen the desirability and necessity of collective action in rural communities. In order that individuals may associate and operate collectively agencies are requisite. Organisations are to society what bony framework and muscles are to the cell-organisms which make up the human body. They make possible united effort on which much of the individual's happiness depends. In the country especially the individual can accomplish little of a social nature through individual undertakings. He is, therefore, all the more dependent on social contrivances to secure collective results.

It is well, however, to remember that organisations are but the means through which human welfare is to be attained. They are not ends and the mistake should never be made of establishing them just for the sake of having the equipment which some other community possesses. The country does not need institutionalisation in this sense. Unless a demand exists it is better without institutions.

"Through the Local Improvement Association, the community can work effectively for better conditions — improved roads, better schools, more efficient local government; for greater opportunities for culture, through local libraries, lectures and music. Clubs for boys and girls supply a need in education not satisfied by the home or the school, stimulating, as they do, the child's self-reliance, and a capacity to govern, as well as teaching him to submit in a community,

of his peers — qualities not developed under the restraint of the home or the school."

They also provide older boys and girls with opportunities for study and improvement.

"The need of mutual help is, perhaps, greatest among the women in the community. While the women cling to the narrow confines of the kitchen and the home circle, the other members of the family are developing new interests, and are leaving her behind and mentally alone. If she can keep abreast of the world and its interests, lighten the drudgery of the household by adopting improved methods, learn what may contribute to the better upbringing of children, the gain is not only to the woman but to the family as a whole. In the grind of routine household duties, there is need of the mutual encouragement that comes from common effort in one direction, and of stated times when the women of the community can come together for serious conference or for pleasure. Here is the field of service of the properly organised woman's club." [1]

1. The Local Improvement Association is a means of getting things done for the community which individuals are not likely to undertake.

The Association may undertake the clearing of weeds from streets and roads, and from open fields to prevent seeding; the removal of rubbish from public places; improvement of schoolhouses, churches, and their grounds; the planting of trees in public grounds and along roads; drainage and sanitation of pestilential places; and whatever is in demand. Securing the participation of children in activities and programmes is important. It arouses their interest in the country and secures the translation of family interest into action.

Special days and occasions may be taken advantage of with good results. Arbor Day affords such an opportunity. Children may well be instructed in advance in school or in a

[1] Stern, "Neighbourhood Entertainments," pp. ix-xii.

section of the Association in all matters relative to the transplanting of trees and bushes. Thorough preparation and organisation will make the day a successful one and make every one feel that he has contributed something.

Another opportunity is offered by local history. A committee of the Association may be formed on "History and Historic Landmarks." Such activities cultivate the spirit which talks of "our town," "our township," "our district." It breeds local patriotism and gives the community an individuality.

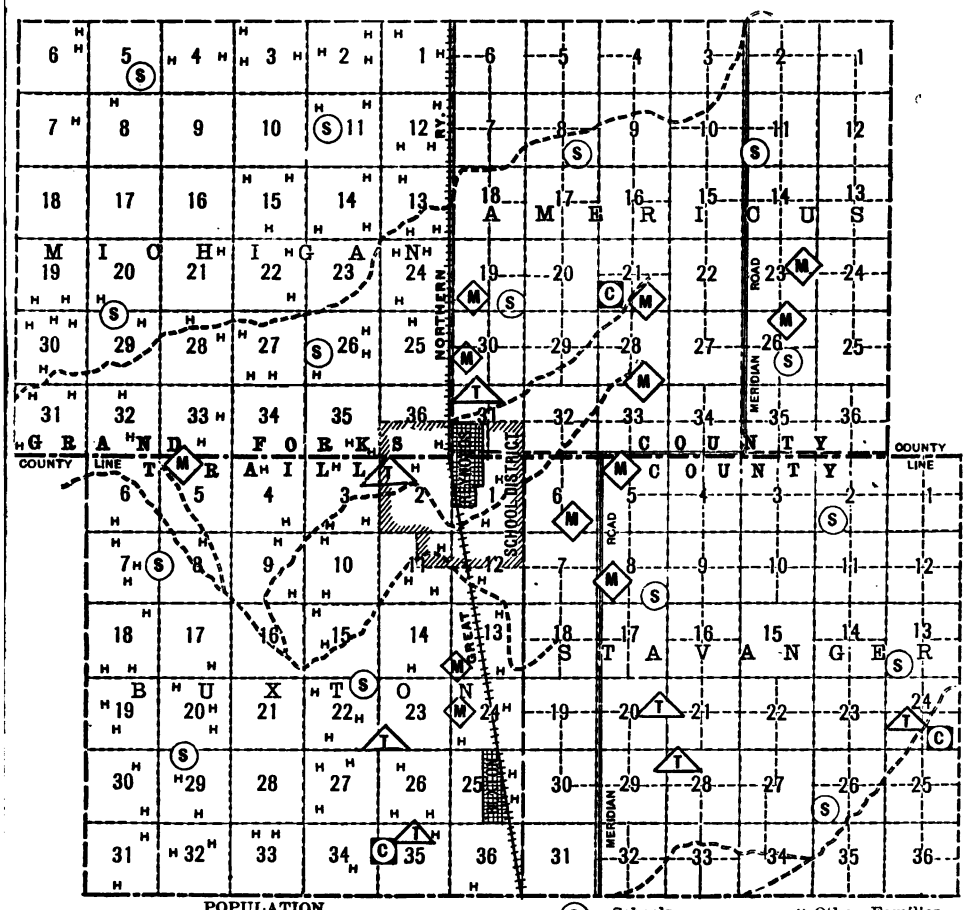
The Association may promote Old Home Week for the purpose of bringing back the old settlers. It may also initiate and organise a lecture course association which would bring outside talent to contribute new ideas, features, and zest to community life.[2]

2. Boys' Clubs.— Boys' clubs take advantage of the "ganging" age of boys, satisfy their craving to belong to something, and interest the outside home circle in their affairs. They train them to get along with their fellows, to show consideration, and to exercise self-control. Through such organisations leadership is developed. Their negative value is to keep the youngsters out of mischief.

Boys' clubs have a wide range and must be adapted to meet local needs. City boys need to be kept out of mischief, country boys need companionship and training in association. The club must have a definite motive, whether social or studious. The country boy is self-reliant, but needs to learn how to express himself among his fellows, to sink the consciousness of self, to work with others. The club should aim to realise those ends.

There are certain requisites for a country boys' club. The members should be of the same age so as to have a similar grade of knowledge and interests. There should be a variety of occupations in the club to meet various tastes. They

[2] Stern, "Neighbourhood Entertainments," Chap. 1.



POPULATION

	1890	1900	1910	
Americus	544	462	387	
Michigan	369	279	275	
Buxton	1021	1110	668	1088
Stavanger (Org'd 1908)			420	
Reynolds		389	412	

may consist of debates, essays, and readings, to be alternated with indoor athletics, outdoor games, recitations, simple plays and entertainments. A few special events like public entertainments, debates with rival clubs, and competitive games, give the members something to look forward to and increase their interest as well as that of friends. Jealousy is allayed by rotation in office. A regular place of meeting is advisable, although meetings may be held at members' homes in turn. The decoration and improvement of a permanent club room adds interest. Weekly meetings in winter, if possible, is advised, with one formal meeting a year. Older boys manage their own club but should have an adviser. Boys under fourteen elect their officers but should be under the guidance of a wise "youthful" leader who is capable of eliciting hero worship. The athletic, local history, natural history, and agricultural clubs, are forms of associations which have proved successful among boys.

3. Girls' Clubs.—It seems wise to separate girls and boys between the ages of twelve and eighteen into different organisations. Their interests diverge then. Boys are active and athletic. Girls enjoy quiet work or reading. The attempt to find common ground results in boredom or silly sentimentality which is worse. Girls have the same desire as boys for companionship, to worship idols, and to "belong to something."

If an athletic club for girls is organised they should be carefully guarded against overstrain. Clubs in local and natural history are suitable to them. Sewing and cooking classes taught by competent women of the neighbourhood or others are desirable.

4. Young People's Clubs.— Older boys and girls have the same desire for companionship as younger, and secure greater gains from clubs. The sexes work together well after the age of seventeen or eighteen. Their interests are more in common. The programmes may be made systematic and may be conducted by the members, but older and wiser lead-

ers are helpful. Literary studies have been found to give satisfaction and profit. Shakesperean studies opened up ambitions to excel in rendition of parts. Open readings may be given after some excellence has been attained. These become social events to the young people of the neighbourhood. After each session time is devoted to social intercourse. Amateur theatricals may be undertaken under proper direction. They are a source of pleasure and a means of culture. Participation improves the memory, speaking ability, ease of carriage, appearance in public, poise and self-control. The study of parts between times helps to hold the young people together.

It is unfortunate that a literature which touches the interests of farm life closely does not exist. Poems, novels, serious works of various forms, are quite largely urbanised or industrialised. Young people's and other rural literary and study clubs would have a more permanent foundation did the subject matter pertain more intimately to the life conditions of the country.

5. Women's Clubs.—"A survey of the work of women's clubs throughout the country discloses the fact that in most instances, these clubs, far from leading women into greater worldliness and away from their households and children, are useful in aiding the mothers to become better home-keepers. In other words, these clubs help the modern home to keep pace with modern school and business life. Woman has always been considered the great social factor, consequently it lies with her to institute whatever reform makes for better community life, provides openings for mental development or initiates harmless and satisfying forms of recreation.

"All forms of recreation and of work gain by being shared with others. The temptation to form the stay-at-home habit is great, more particularly to women who have the care of large families and live in isolated districts. They are apt to lose the desire for contact with the life of the community

and to fall slaves to a deadening routine into which it grows more and more difficult to break. To create a bond of friendly intercourse between such women, and a common meeting-ground where they may come together and spend an occasional afternoon, there to read the same books or to express their thoughts to one another, is the object of the club; and its effect is found to be the rousing of latent interests and broadening of both mind and sympathies."

The question of available subjects is a difficult one. What women are accomplishing in various fields should stir up interest. The work of literary women is most accessible. "Travels at Home" is another field. One class completed a round-the-world tour covering several years. Publishing firms issue inexpensive prints of famous places and hundreds of these are obtainable. George Eliot's "Romola" can be made vivid by views of Florence. Something interesting may be derived from a lively art club. Even more valuable and interesting is a household economics course. For this it is advisable to work under the leadership of some neighbouring institution which has experts in the subject. Bulletins of the United States Department of Agriculture on various foods may be obtained as aids. An outline course for such a club may prove valuable. The numbers attached to the following topics refer to Farmers' Bulletins.

1. Economising time and strength in the arrangement of the house and utensils, and in organising household work. (353, 270, 342.)
2. Most economical stoves and lighting devices, their care, etc.
3. Use of fireless cooker, arguments for and against.
4. Care of drains, and garbage disposal.
5. Removal of dust, proper ventilation, rugs, carpets, sweeping, dusting, etc.
6. Canning and preserving. (175, 203, 359.)
7. Principles of nutrition and nutritive value of food.

(34, 85, 93, 112, 121, 128, 142, 182, 244, 249, 256, 293, 332, 363, 391.)

8. School lunches.
9. Household decoration.
10. Best flowers to raise for interior and outside purposes.
11. Use of "parlour" and kitchen.
12. How to keep children at home and interested in farm work.
13. Food adulteration and sanitation in neighbouring states.
14. School and home sanitation, and flies.
15. Neighbourhood beautification and housekeeping.

Another useful series of topics could be arranged on matters of child-life and child-rearing. Refreshments are an important part of the club. It is a good way to get people drawn out over teacups and acquainted and may be regarded as the equivalent of men's "smokers." An efficient committee is necessary to arrange a programme and to see that expenses are kept down and emulation in display does not creep in to dismember the club.

A certain amount of coöperation between town and country clubs is desirable and the benefits are not all to the country woman. Information and vision will accrue to the members of both kinds of clubs. Joint meetings twice a year are found profitable. If the city club has quarters this might be used as rest quarters for country women. Daily visitation by city women establishes many valuable friendships. The rest room for women from the farms, who have to spend hours at a time waiting in stores, is very necessary because of humane utility, apart from any form of club. The women of Ottumwa, Iowa, maintain such a room in the town hall of that place. The library is the seat of the rest room at Storm Lake, Iowa.[3]

[3] The new county court houses at Wahpeton and at Grand Forks, North Dakota, contain rest rooms for farm women and rooms for farm men.

Farm women obtain the pleasures of association and much valuable information and discipline in the Grange, and in the woman's section of Farmers' Institutes. Further reference will be made to these topics in treating "farmers' organisations."

FARMERS' ORGANISATIONS

Various organisations in rural regions have sprung up which may be designated as farmers' organisations. These might be treated in several connections in this volume. Some of them are essentially business in purpose, others primarily educational, but all afford the "social" aspect to a greater or less degree. Only those which appear to be of a permanent nature will be considered.

1. The Grange.— It has been supposed that this historic association was passing away. From 1880 to 1890 the order lost heavily in the West and South, although it grew steadily in New England and the Middle States. Thirty states pay dues to the National Grange treasury, twenty-six states sent delegates to the National Grange in a recent year, and most of these states show substantial growth in Granges and membership. New York alone had 66,500 members in 1905 and four other states ranged from 28,000 to 49,000 in membership. The membership consists of men and women, and of young people over fourteen years of age, who may apply and by vote be accepted. Meetings are held weekly or fortnightly. Each regular meeting has first its business session, and then its "lecturer's hour" or literary session, usually with an intervening recess for social greetings, etc. The programmes are prepared by the lecturer, and consist of general discussions, essays, talks, debates, readings, recitations, and music; an attempt being made to suit the tastes and talents of all members, young and old. Many Granges have built and own their own halls, which are usually equipped with kitchen and dining-room, in addition to audience rooms; for periodical

"feasts" are as regular a feature of the association as are the initiations of new members. The social importance of the organisation is seen also in the fact that last year (1910) ten Grange halls were dedicated in the State of New York.

The declaration of purpose of the National Grange expresses the fundamental objects of the order. Briefly stated, they are coöperation among farmers to secure better homes, better manhood and womanhood, better agriculture in its various phases, the elimination of middlemen, economy and honesty in government, and the promotion of education. Large results have been secured in most of these directions. Coöperative purchasing direct from manufacturers and jobbing houses has taken place extensively; mutual fire insurance companies have been organised in several states, twenty-three such companies existing in New York alone with policies aggregating $85,000,000; several governmental matters have been pushed through by the influence of the Grange, such as the regulation of railroad franchises, establishment of the Interstate Commerce Commission, tax reform in many states, some food and dairy product laws, establishment of rural free delivery, etc.

The distinctive achievements of the Grange in smaller community matters have been furnishing a social clearing house, promotion of family life, and raising the standard of morals. "It is a debating society, club, lecture course, parliamentary society, theatre, and circulating library. In fact, it lends itself to almost any function that will instruct, entertain, benefit, or assist its members financially, morally, intellectually, or socially." Woman stands on an equality with man in the order.

2. Farmers' Institutes.— The Farmers' Institute has been in existence during nearly sixty years, and like the Grange, has demonstrated its usefulness. As the institute is now conducted it is really a part of educational extension work. But it is also an organisation of the rural community for

promoting community and individual interests. Most of the work is done in gatherings of agricultural people and the organisation is a means of intercourse, forming acquaintances, and promoting a class-consciousness.

The Institutes were originally mixed gatherings of men and women, continuing for about two days of five sessions, with mixed programmes. More recently, however, woman's distinct sphere, function, and needs have come into recognition, and she has been allotted a separate section in many states. At the present time institutes for young people between the ages of 14 and 19 are being held.

In 1910 every state had institutes organised under the charge of responsible directors with a corps of over 1,000 teachers who were specialists. Besides regular and special institutes the movement embraces movable schools of agriculture, field demonstrations, and agricultural trains.

The typical institute session consists of about three topics. These may be treated by experts from agricultural institutions or departments, expert farmers from the outside, or local farmers with recognised ability. Demonstrations are frequent. Object lessons are regarded as essentials to drive the truth home. Social intermixture and farm talk abounds in intervals between sessions.

Women's sections and special institutes are devoted to home matters. Special lecturers and demonstrators lead and guide the discussions. The tendency is in the direction of placing much more emphasis on these schools for women.

Young people's institutes differ from boys' and girls' clubs as organised by the public schools in that they are officered by adults, and their instructors are capable specialists of the same qualifications as those who lecture before farmers' institutes for adults. Since children over 14 years old are deprived of advanced training in farming, the instruction is wholly vocational.

The states appropriate money to support all forms of in-

stitute work and they are either under state or county direction. The United States Government contributes to its promotion through experts, and the support of agricultural colleges, whose staffs are drawn on for directors, experts, lecturers, demonstrators, etc.

Institutes have not only informed but inspired farmers. They have aroused dormant communities, quickened life, made men think and discuss, given opportunity for self-development, encouraged the despondent, and lightened the burdens of many men and women by teaching better and easier methods of farming and housekeeping. They have popularised agricultural education and started multitudes to attend agricultural colleges. Reading-courses and correspondence-courses are growing factors in agricultural education; but they cannot take the place of the institute, whose power is in face-to-face discussion and personal contact.

3. The American Society of Equity.— The American Society of Equity of North America is a new order. It was incorporated under the laws of Indiana, December 24, 1902. Since then it has extended its membership into several states and has become influential in determining the prices of farmers' commodities. The objects as set forth in Article III of the Articles of Incorporation represent its motive and spirit.

The scope and nature of the order is economic, educational, scientific, protective, social, pacific, and promotive. It is a class-conscious movement based on democratic and coöperative principles. Its organisation is local, country, state, and national, with officers to carry out the policies adopted in each given unit. It is centralised to gain efficiency, but the various grades of the order possess large local autonomy and "the right of the initiative and referendum and imperative mandate shall not be denied the members of their respective unions" (Article IX, section 1 of the Constitution). "The members of this society are expected to extend fraternal care to one another in sickness, misfortune, or distress, and to

their families in bereavement" (Article XIV, section 1). Arbitration is recommended between members, partisan and sectarian discussions prohibited, coöperation heartily urged as the most efficient social means. (Article XIV, sections 2, 3, and 5.) The union label is used as a means of identification.

Arising and spreading as it has at a time when the spirit of organisation and coöperation is abroad, when they are coming to be looked upon as the best means of guarding the interests of the individuals of any class, and when farmers are showing unusual signs of rising to meet the demands for their class, the order of the American Society of Equity bids fair to become a large and permanent factor in promoting agricultural society.

4. The Farmers' Union.— What the Grange and Society of Equity is to the North the Farmers' Union is to the South. This organisation to help farmers was formed in the summer of 1902 by Newt Gresham in the State of Texas. The movement spread rapidly in the South. In 1906 there were Unions in every Southern state and in some of the North. At that time Texas led with 3,250 Unions, Oklahoma followed with 1,400, and Arkansas stood next with 1,356. The total number of Unions was 6,870, the membership was near 300,000, and new Unions were being chartered at the rate of twenty-five per day, with a daily increase of 600 members. A membership of 3,000,000 was claimed in 1910.

The objects and aims of the Union are stated by the by-laws as follows: "(1) To discourage as much as possible the present mortgage and credit system. (2) To assist our members in buying and selling. (3) To labour for the education of the agricultural classes in the science of crop diversification and scientific agriculture. (4) To constantly strive to secure entire harmony and good will among all mankind, and brotherly love among ourselves. (5) To form a more adequate union with those in authority for a more rigid

and impartial enforcement of the law, that crime, vice, and immorality may be suppressed. (6) To garner the tears of the distressed, the blood of the martyrs, the laugh of innocent childhood, the sweat of honest labour, and the virtue of happy homes as the highest jewel known.

"This is in no sense a political party, and shall forever abstain from so much as a discussion of partyism. Yet we do not feel it is our right to place shackles upon the mind nor a padlock upon the lips of any one who may wish to discuss, for educational purposes, the science of government, because upon this great rock all important structures rest for either mental, moral, social, or financial development."

The unions in union states have worked for public warehouses for cotton, and for the lowering of freight rates. The Union has coöperated with Labour Unions, and members of both organisations are known as "union men." In 1910 the Farmers' Union, which met at St. Louis, adopted a resolution favourable to Mr. Gompers, president of the American Federation of Labour, and other labour leaders. It pledges that efforts shall be made to preserve their common "rights and liberties," to give preference to the products of labour which is organised, and that its officers shall confer and cooperate with those of labour for legislative and political amelioration.

5. Farmers' Clubs.— City people have their clubs. Merchants, teachers, lawyers, doctors, preachers form special organisations. The Commercial Club is a kind of home for city men in general who are members, and at certain times the wives of members are invited in. Farmers seem about to follow the example set them. They are establishing Farmers' Clubs, which shall be to the farmers what the other clubs are to the other occupations. It is understood that when a man joins his family become members. He brings it with him. Lunches are brought and the entire day is spent. There is a programme both in the forenoon and afternoon in

which music, recitations, and readings appear, along with serious discussions of farm and home and educational topics by outside and local talent. The interval at noon is made a big event. Good dinners, visiting, discussions carried on in groups, make it the best part of the day.

LIBRARY

1. Importance as a Disseminator.— The term library is used to cover that organisation by means of which society is supplying its members with reading matter. It is one of the important institutions which is used for the promotion of rural life. The dynamic influence of books and periodicals when put into circulation in a community is enormous. Modern experimental psychology has demonstrated that ideas are dynamic. Suggestions and mental images tend to get themselves worked out and realised in action by their direct and immediate influence on the bodily motor system. There are scientific ideas enough, potential, piled up in the libraries of the land, to move society ahead a generation if they could be made actual and living in the minds of men and women of to-day. One of the greatest problems in securing social progress is that of putting scientific information into common use. In our chapters on the improvement of the business of farming, and the improvement of the home and home utilities, we were in the presence of facts which showed the enormous gains rural communities might secure if only the people living in the country could really know the facts and their significance. The library offers one of the available means of putting facts and ideas about agricultural conditions into the minds of the individuals who will live them into actualisation.

While the dissemination of scientific knowledge generally is the greatest, entertainment and satisfaction from reading "light literature" is an important object of libraries. To accomplish this object reading must be made a part of edu-

cation. The reading habit must be established. School and other agencies should coöperate to secure this in youth. In maturity it will enliven the mind and bring a yearly reward.

2. Agencies of Dissemination.— It is somewhat immaterial where the collection of books, pamphlets, and papers which constitutes any given library is housed, just so that it is convenient and usable. If a neighbourhood can afford a separate library building, with various rooms for clubs, organisations, and social centre functions it is a great advantage. Such equipment can be hoped for as yet only in the larger centres. In small centres and in open country districts the collection may find a home in the school building, the church, the country store, or even a neighbour's residence. The method and means of securing the collection is the important thing.

The agencies of dissemination in rural districts are: (1) rural school libraries, (2) young people's reading circles, and (3) travelling libraries.

Permissive laws exist in many states providing for rural school libraries through taxation. Others make state aid conditional on raising a certain amount by private subscription. Compulsory laws are necessary to stimulate most communities to establish these libraries. The Nebraska law requires that 10 cents per child of school age be raised and invested in books other than text-books. Communities having free public libraries to which support to the extent of $300 or over is given are exempted. Wisconsin, Iowa, Missouri, and some other states have similar laws. They have greatly stimulated library extension.

Young People's Reading Circles have proved useful agencies. A board of directors guides in the selection of books. They are of a wholesome nature, adapted to the different ages, covering a wide range of literature, history, and adventure. The purchase money may be supplied from public funds or private subscription.

The Travelling Library has for its objects furnishing good literature to the public, strengthening small libraries, and the creation of new ones. All classes and communities may receive books. They are neatly boxed and sent out to all sorts of organisations seeking self-improvement, such as women's clubs, Granges, alliances, and institutes, workingmen's clubs, Sunday school classes, and even penal and charitable institutions. In small communities where the library finds small support the regular instalment of books is found to be an important addition. The advantage is even more notable in the case of a small rural school library. The travelling library often acts as a stimulus to the community to secure the establishment of a library. Put good reading into a neighbourhood and it whets the appetite for more.

Besides books some State Library Commissions send out other educational material. New York dispenses travelling art exhibits consisting of 1,586 large pictures of "the finest subjects and the best edition"; over 21,000 mounted photographs to be hung on the walls of the school for six months at a time with proper labels and notes; and even better, 24,458 lantern slides, together with lanterns, screens, and attachments for oil, oxyhydrogen, acetylene, or electric light. It also sends out "house libraries" of ten volumes each of which any home may secure for three months for a fee of one dollar.

Van Wert county, Ohio, has established a publicly supported county library system. It consists of a central library, fifteen branch stations which receive 100 new books every three months, and school collections in 90 out of 115 rural schools of the county. During the past year this system circulated three volumes per capita of its 29,119 people.[4]

[4] *Rural Manhood*, III, 227–9.

Rural Social Centres.— In the succeeding chapter something will be said about the advantages of the consolidated rural school as a social centre. No doubt many communities in various sections of the nation will develop such a centre in the school or church. But it is not possible for all communities to adopt the same plan. Consequently it is appropriate, after the discussion of the different rural organisations which need a home, to indicate what plans are taking shape to house rural neighbourhood activities.

The accompanying plans (Pictogram 5) for a neighbourhood clubhouse appeared in the Minneapolis *Journal* of May 3, 1914. They were worked out at the suggestion of Mr. Ball, secretary of the crop improvement committee of the Council of Grain Exchangers.

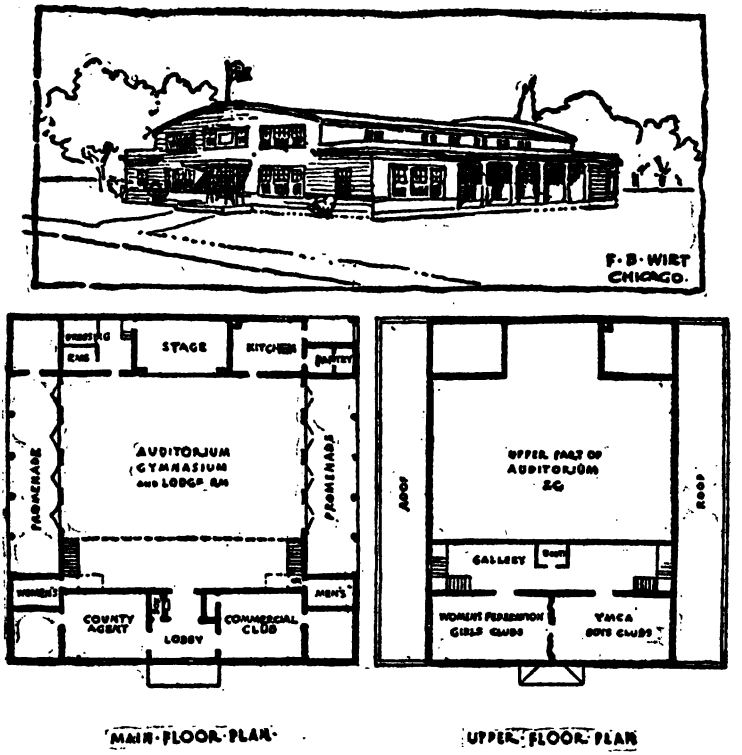
The following explanation of the plans will make their arrangement and purposes clear:

"The central feature of the plan is an auditorium, available for various uses. The room can be just as large as necessity indicates it should be. It is a ground floor room, with numerous doors on either side and in front, so that the element of danger, even if the structure is of wood, is reduced to a minimum. Moreover, it is convertible. It can be used as a gymnasium for school sports and drills, or it can be used as a lodgeroom. A stage is provided, again, so as to provide for theatricals, and a kitchen adjoining gives opportunity for the use of the room for banquets, or winter picnics. In the centre of a balcony at the end of the room opposite the stage is a booth for a motion picture machine, suggesting still another use. The fact is, the plan, although very simple, meets almost every demand that can be placed upon such a room.

"Another feature of the building is seen in quarters provided for various agencies in welfare work.

"On the ground floor to the left of the lobby is a room for the office of the county agricultural agent. The county

PICTOGRAM 5



Clubhouse for Rural Neighbourhood

agent is the country-life leader of his county. He needs to be accessible to the people of the farms as well as to the people of the towns. His office is a bureau of information. Moreover, one of his great duties is in organising and fostering neighbourhood clubs. His office, therefore, becomes headquarters for such clubs. The use of the building through this office would tend to create a sense of possession on the part of the country people, and to draw them into closer touch with the people of the town.

"Helping in this same direction is the office of the local

Commercial Club, just across the lobby. Such a club's office becomes a clearing-house for all of the clubs of a county. In a building of this kind at a county seat it would come to be recognised as such, and outlying communities would be connected up with the central community, while both would find profit in working alongside of the county agent and his rural clubs.

"Over the county agent's office is a room designed to be used by the Women's Federation and by girls' clubs. The Women's Federation is reaching out more and more into the country and laying hold of its problems, and this office would become the centre of its activities in the various counties. Here, too, could be exercised guidance for all kinds of girls' clubs.

"Opposite this room for the work of the women is one designed for the Young Men's Christian Association and similar organisations. The possession of such a room centrally located would give a real impetus to religious work, as it touches daily life. Other activities would profit by contact with the workers in this line, and these would profit by the same contact as well.

"On either side of the building is a long promenade, for use in connection with summer meetings.

"Such a building could, therefore, become the centre of the business, social, esthetic, and moral life of a county, or of a community. There could be no objection to having one in every community desiring it, the offices indicated being assigned to the various leaders of the district.

"It is estimated that the cost would run from $3,000 to $6,000, according to the size of the building and to the kind of material used. Of course the cost might run much higher than $6,000, if an extra large building were desired and fireproof construction advisable. Very simple construction would bring the cost down within reach of any community.

"The plan looks feasible. In any event, it indicates how

the tendency to get together is taking practical form such as will give greater efficiency."

Ideas for the creation of a model rural community centre on a somewhat elaborate scale are also taking shape. The following plan has been developed by the Agricultural College of Cornell University. It provides for developing a rural centre in connection with the fair grounds with the purpose of putting the investment in such grounds to use during the entire year.

The elements in the plan, briefly stated, are as follows:

"First.— A piece of land about twenty to thirty acres in extent, laid out in somewhat the same way as the usual fair grounds, but to be used as a public park and to be open at all times.

"Second.— A grove for picnics, summer gatherings and shelter purposes. If the grove is set out it should include the best ornamental trees.

"Third.— A consolidated or combined elementary and high school building in or near the grove.

"Fourth.— Athletic grounds for local pastimes, for the use of school children and for county athletic meets.

"Fifth.— Experiment or demonstration plats.

"Sixth.— A building that can be heated for year-round meetings and exhibits.

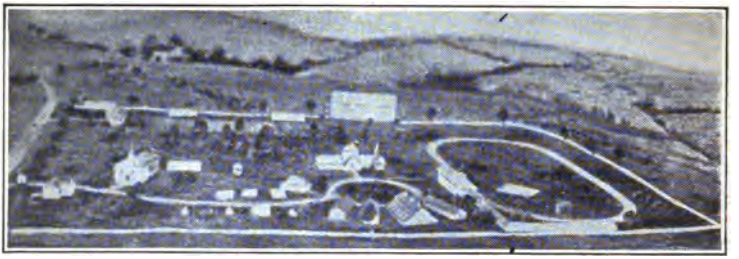
"Seventh.— Regular fair buildings.

"Eighth.— Race track, to be used for local rather than professional races."

In case it is not desirable to develop the centre in connection with a fair, the last two elements may be omitted. The realisation of the first six points will secure a centre that is well adapted to the average rural neighbourhood. The suggestion is intended for such communities and would appear to be entirely feasible.[5]

[5] *Rural Manhood*, Jan., 1914, pp. 24–5.

PICTOGRAM 6



Model Exhibit of the Rural Community Centre with its Various Features

REFERENCES TO CHAPTERS

Clubs

Stern, *op. cit.* Introduction, and Chapters 1–4.

Kern, O. J. "Among Country Schools," Chap. 7.

Bailey, L. H. "The Training of Farmers," pp. 37 ff.

"Boys' and Girls' Agricultural Clubs." *Farmers' Bulletin*, No. 385, U. S. Department of Agriculture.

Edwin L. Holton. "Neighbourhood Improvement Clubs for the Rural, Village and Town Communities."

Farmers' Clubs — Bulletin, "Better Living Association," N. Dak., 1912.

Farmers' Organisations

Butterfield, K. L. "Chapters in Rural Progress," Chapters 10 and 11.

"History of Farmers' Institutes in the United States." U. S. Department of Agriculture, *Experiment Station Bulletin*, No. 174.

"Farmers' Organisations." J. A. Edgerton, *Watson's Magazine*, February, 1906, pp. 423–428.

"Farmers and Unionists Plan to Work Together." Chicago *Record-Herald*, May 5, 1910.

"Report of the Secretary of Agriculture," 1910, pp. 143–4.

"Proceedings of the Eleventh and Fifteenth Annual Meetings of the American Association of Farmers' Institute Workers," 1906 and 1910. *Experiment Station Bulletins*, Nos. 182 and 238.

"Constitution and By-laws of the American Society of Equity of North America," Indianapolis, Indiana.

"The Third Power," J. A. Everitt.

Editorial, Chicago *Record-Herald*, May 10, 1910.

"A. C. Editorial on Farmers' Clubs." Grand Forks *Herald* (North Dakota), January 17, 1907.

Marsh, B. C. "The State Grange — A Social Force," *The Survey*, February 12, 1910, pp. 703–4.

"Rochester Social Centres and Civic Clubs — Story of the First Two Years." Published by the League of Civic Clubs, 1909.

Libraries.

Kern, O. J. "Among Country Schools," Chap. 6, "School Libraries."

"The American Rural School." H. W. Foght, Chap. 13, "The Library and Rural Communities."

Gillette, J. M. "The Socialisation of the Library," *American Municipalities*, November, 1907.

Bailey. "The Training of the Farmer," p. 37 ff.

"Libraries for Everybody." Herbert Putnam, *World's Work*, July, 1905.

"Applied Sociology." L. F. Ward, Chap. 12.

Budlong, Minnie C. "A Plan of Organisation for Small Libraries," North Dakota Public Library Commission.

Metz, Corrinne A. "A County Library System Demonstrated," *Rural Manhood*, III, 227–9.

Rural Social Centers

Minneapolis Journal, May 3, 1914.

Rural Manhood, Jan., 1914.

Curtis, H. S. "Play and Recreation for the Open Country."

CHAPTER XVII

RURAL SOCIAL INSTITUTIONS AND THEIR IMPROVEMENT (CONTINUED)— THE CHURCH

The Function of the Church.— Because the church is an old historic institution which has served the interests of humanity in various ages so intimately and well it is difficult to form a fair and accurate notion of what it may and should do in any community. Our eyes are obscured by the glory of its past services and by the great part it played in certain periods. It is plain that the church does not occupy the prominence in the affairs of the world it once did. It cannot play the rôle it assumed as dictator to kings and emperors in the time of Innocent III. Its political influence is now rather incidental and a divorce between church and state, initiated by Rhode Island, put into effect first on a national scope by the United States, is being realised among European nations, bidding fair to become universal.

It is worth discussing what the place and function of the church is in the modern world. Theoretically and sociologically this may be determined, not however, with absolute unanimity of opinion. The personal bias and philosophy colour the findings of various thinkers and make the conclusions divergent. Some modern conditions, however, may be noted which would seem to mark out about what any given institution may and may not do. The situation relative to the church in society from sociological considerations may indicate what the church can not hope to do in the rural region.

The modern world works upon the principle of the division of labour to a greater extent than any previous age. On

the structural side social evolution has consisted in forming and establishing structures to take up the tasks which new interests and demands create. Continuous differentiation has mutiplied organisations, each with its work to do. Functionally, social evolution has consisted in the differentiation of human wants, the creation of new interests, the multiplication of divisions of labour, the intensification of specialisation. Each social function has had its organisation to execute it. Each fundamental interest has had its primary institution consisting in turn of subsidiary, specialising organisations, through which both the central and the more incidental wants obtained realisation. Thus we have such primary institutions as the religious, the educational, the industrial, the political, and so on. Each one of these is broken up into differing functional activities, which seem essential to the execution of the primary function.

In the case of the educational organisation, the primary aim is training, preparation for society; imparting knowledge being the central idea. In order to convey information, there may have to be government, moralisation, communication, and other activities carried on in the educational system as means to the great end. In the political activities equitable regulation of property and personal relations in society is primary. To secure this purpose the organised state ensues, government in all its phases is established, political parties with their machinery for campaigning and securing control of the state develop. In the religious sphere worship in some phase has been the central function. It may have consisted of attempts at frightening, at pacification, or at communion with divinities or the deity. Incidentally subsidiary activities such as ecclesiastical government, education, charity, and various other activities were carried on.

Thus in all these cases there has been some primary function undertaken with developing subordinate functions as means of realising the dominant purpose. It would be a

sociological error to think the case may be reversed and that the subordinate function may be elevated to the position of the primary. If education turns aside to govern the state or to manufacture goods or to preach doctrine in a predominant manner, making the impartation of knowledge secondary, it usurps the function of other institutions and abdicates its own. If the church, which is the institution for realising the religious wants of men, undertakes to regulate the state, or to impart information of a scientific and vocational nature dominantly, dropping religious culturisation into a subordinate place, it forgets its historic and sociological division of labour and seeks to do the primary work of other specialised institutions.

The mistake is often made of assuming that because the church once carried on government or education it may do so again. This assumption forgets that social evolution has succeeded in creating new institutions to take over some of the work formerly carried on by other institutions. The impress of specialisation is now so firmly established that the new order cannot be reversed without a revolution. The educational system of modern society is so well established and developed, with its central aim of imparting useful and scientific knowledge in a systematic and thorough manner, that it is anachronistic and reactionary to propose that the church or any other institution may usurp this work. The rural school, the extension work of university and college, the institutes with their corps of experts, all supported by public funds, are in the field to stay and to become more firmly entrenched.

Principles Regulative of what the Rural Church May Undertake.— There are certain useful things which the church in the rural district may accomplish. First, it must not forget to carry on its primary function of teaching fundamental religion. If this is not the primary work of the church there is no other institution to take it up. It is not the business

of the state, the school, or the press. If religion is essential to the masses, then the church must see to it that the masses obtain it. This does not mean that a church must return to primitive methods, preach systematic theology, or engage in polemical discussions with other sects. Christianity has evolved in recent years. It has grown in ethical content and moral import. Religion is seen and interpreted in its social relationships. When this is done it is found to be uplifting and attractive. Breadth of vision, profundity of meaning, and genesis of new vigour are by this means secured for the average individual.

To secure the best results from religious teaching the Bible needs to be interpreted. The Bible is an evolutionary literature. In it may be seen the development of religion in the life of a single people from the stage of primitive clan and tribal superstitions and revolting practices, through intervening cleansing steps, to the highest monotheistic conceptions and ethical content. An ignorant preacher will place the abhorrent deeds of the primitive Hebrews on the same ethical plane with the elevated teachings of the great prophets and the sublime ideas of Jesus. He will condone the polygamous practices of David and Solomon, the reactionary ideas of Paul relative to woman, and place the Levitical code on a par with the Sermon on the Mount.

Modern men are repelled by such confusing and contradictory conceptions. It is neither reasonable nor inspirational. It ignores the teachings of science. But let a wise leader explain the Bible and the religious life of the Hebrews as a growth and light breaks in. The Bible becomes a fascinating piece of literature and history. Information of value is obtained in it as to social evolution and the evolution of religion. Jesus appears all the greater because he is the consummation of the development. His ethical teachings secure new meaning since he is seen to occupy the position of both religious and social reformer. It is needless to say that this

procedure calls for an advanced type of preacher in the rural churches.

Second, the country church can act as inspirer and leader in the larger and more significant advances now demanded in the country. In preceding chapters we have seen what many of these things are. The exposition of the attractions of contact with nature; the needs of improving business, agriculture, the home and the neighbourhood; the rights of labour on the farm; a better educational system; the beautification of home grounds and the country landscape; better roads; proper methods of caring for the poor and the defective classes, are some of the numerous topics of a larger nature which the country church may well consider.

It is not expected that the preacher will be able to act as expert authority on each and all of these subjects. But he should know the needs of country life so well, see the value which would ensue from a realisation of better things in these and other directions, and obtain such a perspective of the ideal community, that he will be able to give inspiration and direction to the movements. A leader who realises the need in a given direction will be able to agitate, suggest and organise until a movement is put on foot to meet it; even though he does not understand all the details which the realisation involves. A man may be perfectly competent to preach on the demands and results of the new agriculture, without being an expert farmer. The literature and information on the subject is so abounding that several addresses on various phases of the subject might well be given. The subject treated in a large way, and in view of its significance for production, for the nation, for building up the home, for educating the children, and for improving life in the neighbourhood would instruct even the expert farmer and encourage the average resident to take action.

A series of addresses on Sunday evenings might easily be made on each of the larger subjects denoted. Outside experts

and speakers could be obtained for portions of them. Able local farmers would be able to treat some of them. In fact, much of the leadership of such things must be expected of laymen and encouraged in them. Let the minister realise that his great function is that of director and promoter, enthusing and giving courage to his members and modestly pointing the way, and he will double his usefulness. Unfortunately, the average country clergyman has no equipment for this service. The reasons will become apparent when we consider the decadence of the country church.

Third, the church may serve the purpose of a social unifier and social centre or clearing house. It need not seek to assume the monopoly in these directions. Frequently other institutions have already taken the lead in this direction and are doing the work well. Even in such cases there is probably a large amount of supplemental service which may be rendered. But where such enterprises are not established the church should by all means either seek to carry on the activities needful or stimulate the establishment of such organisations as will do so.

That these functions are in demand in the country as well as in the city is obvious. We have already noted the necessity for socialisation and for a larger social life. The points made may be referred to. Social unification has not been treated specifically. The want of this is often apparent. Divisiveness, factionalism, neighbourhood feuds, sectarianism, stubborn prejudices are conditions which exist in multitudes of districts. A neighbourhood in the sense of a community existence or life is impossible where this situation prevails. Discord is substituted for concord. Common interest is lacking. Realisation of collective achievements is impossible. Hence the need of a rallying place and the maintenance of activities and interests which will obliterate the false barriers and merge the interests of the inhabitants in a common welfare movement.

The enterprising church may become such a rallying point. It may furnish a home for clubs for young and old, boys' scout movement, young people's societies, entertainments, dramatic and theatrical activities, moving pictures, educational programs. It may hold agricultural contests and fairs, father athletic sports and contests, house institutes, granges, and equity societies, become the patron saint of domestic science and child culture for the good of the home, and in fact become all things to all men. Such a church must appeal to men. It must satisfy their various wants — social, ethical, religious, cultural; for amusement, recreation, and sport. It must be larger than sectarianism, as catholic as human nature, and maintain the spirit and ideal of social service above that of individual salvation. Being these things it will be vital, vigorous, and win the loyal adherence of the community it serves.

Decadence of the Rural Church.— That the rural church as it exists to-day is unfitted to meet the demands of rural communities seems to be quite generally admitted by students of rural sociology. This might be expected of the rural church when the church generally is undergoing such wholesale criticism for failure to adapt itself to the problems of to-day. This general criticism must be largely just because so many eminent churchmen admit and express it. One or two typical opinions of the decadence and invalidity of the country church must stand as examples of a larger volume.

Rev. Warren H. Wilson, Superintendent of the Department of Church and Country Life of the Presbyterian Church, writes:

"For more than a year it has been my duty to assemble the ministers and officers of country churches at central points throughout all the older states of the Union — excepting certain southern states — and to discuss with them the conditions prevailing among the churches. Generally, almost universally, these ministers and officers agree in stating that the country church is losing its hold. They speak for the

Protestant denominations which have a trained and specialised ministry." [1]

Professor Bailey gives this as his opinion:

"In many places the rural church has practically died out. In other places it is very weak. Many have felt that the usefulness of the country church is passing, . . . is not accomplishing what it might for rural communities. This is not due to lack of devoted service on the part of the country pastor, but to a need of re-direction in the institution. Concerned in too many cases with technical religion, formal piety, small and empty social duties, the country church does not appeal strongly to men with rich red blood in their veins. The hardness of the dogma is the measure of sterility. The trouble is that the rural church has no organic connection with the life of the community, in this regard being worse off than the school." [2]

The causes of this decadence are important as indicating the direction improvements must take. They may be summarised as follows:

1. The existence of a divided religious ministry. This means sectarianism in church work.

"The country church has been a mere means for distributing the hope of personal salvation. For this purpose it did not need to be, in the judgment of former generations, a socially effective organisation. Any small group of believers has been at liberty to build a meeting-house and maintain an organisation. National denominations have been all too willing to support these competing congregations in the country community. We have, therefore, in almost all the older states too many country churches. . . . We recently discovered in Pennsylvania a farming region in which within a radius of four miles from a given point there are twenty-four country

[1] *American Journal of Sociology*, March, 1911, p. 688.

[2] L. H. Bailey, "The Training of Farmers," p. 77; and "The State and the Farmer," p. 132.

churches; within a three-mile radius from a point half a mile farther on there are sixteen of these country churches. Of course this is an impossible social situation. Whatever be its doctrinal value, it is a form of social inefficiency." [3]

In an Illinois village of 200 inhabitants, a few years since, there were fourteen churches in the place. It was impossible to support these churches either as to membership or finances. Indifference resulted from so many faiths.

2. A lack of adaptation to modern conditions, to scientific intelligence, and particularly to agricultural needs. It needs spiritualising and socialising.

"It should express and encourage the natural inspiration that may be made to flow from the common affairs and practices of any agricultural community. . . . The country saloon is open continually. The country church ought also to be open continually, or at least it ought to have a continual personal contact with its people; and this contact must be much more than through customary religious work." [4]

It fails to reach and satisfy the social needs of modern agricultural communities in competition with near-by urban groups. With the growing indifference to polemics, to argumentative discourses in support of the denominational or sectarian position as to the exact mode of baptism, the order of conversion, regeneration, and justification, the procession of the triune person, the existence of a devil and eternal real fire for sinners, preachers have been trying to adjust themselves to their congregations. Their doctrines have become vague, indefinite, and unsatisfactory on certain essential doctrinal points. They have engaged in diluted abstractions instead or waded into a sea of sociological problems for which they have had no training. Whether the preacher treated doctrinal differences, dealt in vague abstractions, or gave allopathic doses of undigested sociological information, his efforts were alike unsatisfactory.

[3] Wilson, *op. cit.*

[4] Bailey, *op. cit.*, pp. 77 and 133.

3. The attraction of the churches in near-by cities and villages has been a factor in rural church decline. Larger and more finely furnished buildings, a choir and better music, a higher salaried and superior preacher, the dress and manners of the urban populace, are some of the attractions which have taken the young people away from the neighbourhood meeting-house.

4. There has been a growing inferiority of country pastors. Salaries are low in the country. Life is more comfortable in the cities. There are more privileges and opportunities. Hence the abler and more highly educated men are drafted off to city churches, leaving men with undeveloped talents and narrow, traditional views to rural churches.

5. The great social and economic changes of the age have affected country churches. The telephone and the rural mail have introduced rural inhabitants to social opportunities, broken into the isolation, and deprived the meeting-house of its prestige of affording the only chance for adult intercourse. Better roads, improved vehicles, trolley lines, and automobiles have made the near-by and even somewhat distant cities accessible. Railroads which have been spread like a net work over the land have caused villages and cities to spring up every few miles. The open-country church has failed to sustain itself in competition with the larger attractions of these places. Here farmers resort at the age of retirement, children attend school and form social attachments, and the superior churches have drawing power.

Population has become migratory in rural regions, a study of interstate migrations is sufficient to attest this. Shifting land values by reason of the opening up of new lands, the development of cities, mines, forests, and railways have caused a great ebb and flow in population which has done much to unsettle church membership and sap the support of the rural church. The tenant or renter system has developed in many states. It is difficult for the country church to find support

and a lay leadership in the face of inhabitants who feel no responsibility for keeping up the social and moral life of the community.

Methods of Improving the Churches.— A consideration of the causes of arrested development or decadence of the country church has furnished the suggestions for its improvement. The statement of causes has been a negative statement of methods of betterment. Together with the statement of the functions of the country church, they form an approximate formulation for advance. A brief positive synthetic presentation will make the idea of what is needed more vivid.

1. The country church must be given a modern leader in the person of its preacher. Mr. Wilson, who holds a position of authoritative expert in rural church matters writes:

"Behind the country churches stand the theological seminaries; professional schools, founded and established for the training of ministers; originally country ministers. At the present time these schools, with almost no exception are rendering an entirely inadequate service. More than inadequate: it is misplaced and it has the effect of misdirection. For three years the student of the ministry is detained away from the study which he should pursue and for a good part of that time he is diligently trained in studies that he ought never to follow. The country community, therefore, is a field, in the case of most ministers, for original investigation — untrained, amateur, and unsystematic investigation — in which he has no help from those appointed to be his helpers and his leaders. . . . My thesis then is a plea for economic and social training of rural leaders; especially for country ministers. If this work is not done by the seminaries it should be undertaken by the universities. The [5] president of this society has a weekly class, attended by more theological students, so far as I am informed, than meets in any seminary of theology." [6]

[5] Professor Franklin H. Giddings, Columbia University, New York.

[6] *American Journal of Sociology*, March, 1911, p. 692.

The social and economic training alluded to should give (a) a systematic account of society so that the great principles and laws of the larger modern social world as affecting the rural community may be understood. (b) The special industrial and social nature and conditions of agricultural regions. (c) The functions which a church may rightfully perform and which it should undertake for such communities. (d) How to make a sociological investigation or study of the neighbourhood, which shall not only be a religious canvass of the district, but which shall take in the vital conditions of age, sex, nationalities, wealth, occupation, social status, dependent, defective, and delinquent factors, education, and social organisations.

2. The church must be socialised. This means to adapt it to the needs of the times and place. Enough has been said in our earlier consideration of the church as to what may be done. In case the church cannot become a social service church every pastor may become a social service pastor.

"There are some things the church cannot do; there is nothing it may not through its pastor inspire. There are some uses to which the country church cannot be put; there are no uses to which the country pastor may not be put. . . . The pastor ought to be an authority on social salvation as well as on personal salvation. . . . He is relatively a fixture. He is less transient than the teacher." Hence he is the logical leader in community affairs.[7]

There are several instances of socialised rural churches. One instance will be reproduced here.

"At Plainfield, Illinois, is a very notable country church, in which, under the leadership of a man of independent genius, the church has become the social centre of the whole community. In this instance the farmers have felt no need of economic leadership. They are still tilling a fertile soil, and before its fertility is exhausted the newer agriculture will

[7] Butterfield, "Chapters in Rural Progress," pp. 177–8.

doubtless enable them to maintain their place. But the church in the community has undertaken the social cultivation of the people. It has assembled the young people for musical, theatrical, and athletic enjoyment and training. The church edifice has been rebuilt; and instead of one room for worship only, the building now contains a gymnasium, dining-room, cloakrooms for men and women, and a rest-room for mothers with babies in their arms, young people's social parlour, study, and numerous classrooms for use in religious training of various groups. The success of this church has been in satisfying the social needs of the community. It has had to compete with granges and social clubs and has survived where they have failed. This church itself has grown in membership, and in moral and spiritual power, with the social culture which it has imparted to the community." [8]

3. Union and coöperation should be substituted for sectarian divisiveness. There is ecclesiastical, economic, and social waste from the present system. Churches need federation in order to survive. They must have it to do the needed work. It would be an agency to unify the community socially. By statistical coöperation the various churches may arrive at a clear conception of the field confronting them, and enter upon an effective division of labour. All students of rural matters who believe that the church has a service to perform for the country advocate federal coöperation.

The churches in the foreign mission field are setting an example in this direction. The field is districted into spheres of work and each denomination is allotted a distinct field. Some approach is being made to this in home mission work. Certain denominations have a working agreement not to intrude into each other's territory in duplicating churches, and are uniting or allotting activities in an overchurched district.

The Young Men's Christian Association.[9]— It is legitimate

[8] *American Journal of Sociology*, March, 1911, p. 685.

[9] Since this was written "Rural Work of the Young Men's Christian

to treat this organisation under the term church, since the general term church stands for all religious agencies. The Y. M. C. A. is a well known and established institution in city religious and educational work. It has begun rural work so recently that it is difficult to arrive at a just conception of its activities.

The rural department of the Young Men's Christian Association began with the organisation of the first rural group by Robert Weidensall in De Page County, Illinois, in 1873. But the movement did not begin to take on large proportions until about 1906, when it was officially recognised as a department of the International Committee. That the movement is growing rapidly is indicated by the fact that in 1909–10 there were 324 rural groups or centres, while in 1912–13 there were of these 599, the gain for the last of these years being 116. County rural organisations existed in thirteen states in December, 1913, the state having the greatest development being Michigan with 102 centres.[10]

The purpose of the County Y. M. C. A. is stated as follows: It "seeks to unite in a town, village, rural community, or in the open country the vital forces of young manhood for self improvement, physically, socially, mentally, and spiritually, and to give expression to these resources in community life for the betterment of others." "Experience has proven that its best work is done, however, in communities in which the rural environment dominates the community ideal."

The plan generally followed consists of an initiation of the movement by the State Committee, a campaign for funds by a County Committee, a county organising convention, the election of a county board, and the selection of a county sec-

Association," by A. E. Roberts and Henry Israel, appeared in the *Annals of the American Academy of Political and Social Science*, March, 1912, giving a more adequate account of county work.

[10] "Rural Manhood Statistics of the Movement," by Henry Israel, Dec., 1913, pp. 366–9.

retary. The secretary organises local groups or clubs, the intention being to place one within easy walking distance of every boy in the country. These locals have their volunteer leaders and officers. Where possible club buildings are erected. The work is thus made intensive. Orange County, California, has two such community buildings. "These buildings are bungalow style, having class rooms, club rooms, and kitchen facilities. A large playground in the rear of each affords splendid opportunity for outdoor games, and in both cases these buildings and playgrounds have become the centre of boy life in these communities."

Two elements contribute to the efficiency of the organisation. First, the County Committee, a voluntary organisation of from fifteen to twenty prominent men of the community in business, professional, and agricultural lines. They furnish the resources of the neighbourhood for pushing the work and must stand for the best things in community life. Sub-committees are appointed to carry on the various kinds of work in conjunction with the employed secretary and trained experts. Second, the County Secretary, who must be a man trained for his work, a believer in the country, possess a capacity for leadership, and be a friend of young men. His primary task is to discover, enlist, train, and utilise leadership. He is not to duplicate organisations but to coöperate with those already established in the field. He seeks to coördinate what is established and to stimulate organisation and effort where these are lacking.[11]

With the growth of the movement it is expected that county officers other than the secretary will be employed, such as physical directors and social centre directors. At present the activities are those which local volunteer conditions will permit: Bible classes, social meetings, feasts, Boy Scout organisations and work, camps, entertainments, and kindred

[11] Roberts and Israel, "Rural Work of the Y. M. C. A." *Annals Am. Acad.*, Vol. 40, pp. 140–148.

enterprises. The play tendencies and rights of boys are recognised and given their appropriate exercise. Lessons in health and hygiene naturally go along with the physical work. In one small community one-third of the school boys were, upon examination, found to have a tobacco heart induced by use of pipes and cigarettes. A donation of pipes resulted and boys and parents alike were made, at least temporarily, more serious minded. Travelling exhibits by stereopticon of tuberculosis and other diseases, with lectures by local physicians are promoted. Encouragement of coöperation on the part of rural institutions for community improvement is given. Country fairs have been cleansed and reforms undertaken. Christian life and morals receive initiation and stimulus. Country churches are assisted. Such are some of the achievements of County Work organisations.

The Y. M. C. A. conducts summer schools for County Work at Lake Geneva, Wisconsin, Silver Bay, New York, and Estes Park, Colorado. Over ninety per cent. of the entire force employed have attended summer meetings.

The Y. M. C. A. movement is seen to be comprehensive, alert, vigorous, and practical. Much is to be hoped from it. Says Hon. C. C. James of Ottawa, Canada:

"The rural manhood branch of the Y. M. C. A. is to my mind the most important, it is the most promising, it enters a field that is unlimited in opportunity, and from the results that we are getting in work with our famers' clubs I believe it will grow rapidly." [12]

REFERENCES

Bailey. "The State and the Farmer," pp. 17 and 132–5; and "The Training of the Farmer," pp. 76–7.

Butterfield. "Chapters in Rural Progress," Chap. 12; and "Cooperation and Integration of Community Institutions," *Rural Manhood*, June, 1911, pp. 190–1; and "The Rural Church."

Wilson, Warren H. "The Church and the Rural Community," *American Journal of Sociology*, March, 1911, pp. 668–93.

[12] The files of *Rural Manhood* chiefly furnished the material for this section.

Discussion of the same by E. C. Hayes. Same, pp. 693–5; by J. L. Gillin, pp. 696–700; and by T. N. Carver, pp. 700–702.

Henderson, C. R. Unpublished syllabus on "Rural Communities."

Lander, E. B. "The Reconstruction of the Country Church," *Rural Manhood*, February, 1911, pp. 52–54.

Armstrong, Rev. H. P. "The Story of Middle Creek," same, pp. 54–7.

Small, Charles H. "The Country Church in Ohio," *Congregationalist*, August 19, 1905.

Taylor, Graham. "Rural Regeneration and the Country Church," same, October 3, 1908.

"How Churches in Ohio are Lagging," *Ohio Journal of Commerce*, October 26, 1912, p. 131.

Hagerman, J. P. "The History of Country Work in California," *Rural Manhood*, Vol. II, pp. 67–70.

Weidensall, Robert. "The County Field Work of a County Secretary," same, February, 1911, pp. 48–9.

James, Hon. C. C. "Canada's Rural Progress," same, p. 101.

Wallace, Henry. "To Clean a County Fair a Social Service," same, pp. 83–4.

Hetherington, C. W. "Play for the Country Boy," same, pp. 139–42.

Brown, Dr. John. "A Place to Swim in Every Rural Community and Every Boy a Swimmer," same, pp. 155–6.

Atkinson, O. E. "Policy and Duties of a County Sub-Committee," same, pp. 159–60.

Israel, Henry. "Summer Training Centres for County Work," same, pp. 192–4.

Weidensall, Robert. "The Township or Precinct Organisation Territory," same, p. 195.

"Things that are Doing in County Work," same, monthly reports.

"Conference of Rural Social Workers," *Survey*, August 26, 1911, pp. 747–9.

Hartt, R. L. "The Regeneration of Rural New England Religions," *Outlook*, March 17, 1900, p. 628 ff.

Rural Manhood, reports on County Y. M. C. A. papers, Dec., 1912 and 1913.

Annals Am. Acad., Vol. 40, pp. 140–145.

Rural Surveys, Board of Home Missions, Presbyterian Church.

Earp, Edwin L. "The Rural Church Movement."

CHAPTER XVIII

SOCIAL INSTITUTIONS (CONTINUED) — ADJUSTMENT OF EDUCATION TO RURAL NEEDS

The consideration of education is the most important matter in modern life. Present-day civilisation is built upon intellectual attainments. The matter and methods of science rest beneath our chiefest social structures. Minds immersed in ignorance, sluggish in their action or clouded with the vestiges of past superstitions are unfitted to do the work of their age. The schools of the land are the agencies of inculcating that enlightenment on which both conservation and progress depend and on their successful operation hangs the destiny of the future. To make them qualified and efficient should be the highest aim of good citizens. Rural schools and rural education as portions of our educational agencies share in this regard. The more outstanding features will receive consideration.

In order to face the matter squarely so that we may see the strength and the weakness of our system of training for country life, it will be best to view the demands which press upon rural education.

General Sociological Demands.— Certain demands of a general nature are common to both rural and urban education. We may call them sociological because only will sociological consideration reveal them. Social conditions are the closest and most dominant environment of modern men. We depend more immediately on institutions and social agencies to supply our wants than on nature. Nature is ultimate. If she fails, social beings die. But, other things being equal, we reach her through and by means of artificial structures. The farm-

er does this also, as we saw in Chapter 2. Hence it is coming to be recognised that it is by a study of these changing, developing, external social conditions that the future of the individual and the nature of his education are to be discovered. The general sociological demands are the following:

1. The particular age and place impose their own conditions. First, the age has a spirit or certain dominating interests which cannot be avoided. One of these interests is the scientific. Accurate knowledge and methods of procedure have entered into all developed processes of life and are forcing themselves upon others. Industrial processes are founded on the various sciences. Chemistry lies at the basis of preparation and preservation of foods, which a competent housewife should know; and beneath a knowledge of soils, which the farmer should have.

Second, the region or particular kind of community, imposes its demands. Communities are differentiated by means of their interests. They may be mining, stock-raising, agricultural, industrial, commercial. As such their pursuits, aims, activities, agencies, and matters of knowledge are different. The community business or interest determines the kind of vocational training an individual should have.

Ninety or ninety-five per cent. of the population will either remain in the community they are born and reared in, or will remove to a similar community, one with similar interests. The dominant pursuits of a region may determine what the pupils should be trained for without doing an injustice to any. If this plan is not followed an injustice is done to a large majority.

2. Specialisation to meet differing demands of a highly organised society is required. That society has evolved from the simple to the complex, from a stage of hardly any specialised functions to one of thousands, cannot be doubted. That the process of differentiation is continuing is a well-

established fact. This means that we are living in an age when specialisation is necessary to success. If one is to be master of his fortune he must be master of his business. Society imposes a responsibility here. It demands that the person must not steal his living, else he will be imprisoned; that he shall support himself legally, or he will be called a pauper. It asks that he shall harness himself into some one of its specialties, make a success of it, or else be a floating day-labourer or a parasite. The educational process, therefore, must involve a considerable degree of specialisation or vocationalisation.

3. The social situation requires of men an intelligence as to public matters and a profound love of community welfare. Society is growing democratic. The people are demanding greater measures of control of government. They must consequently have a larger insight into the nature of the complicated mechanism they are to direct and a deeper devotion to its interests. If democracy is to prevail and make progress, an enlightened public mind on matters of state must exist. This calls for emphasis on social study in the schools. The nature of community life, as sociology reveals it, is involved. Economics and civics demand accentuation. These must be taught earlier and with a view to imparting a sympathetic insight and understanding of society and social problems.

A greater degree of self-government should take place in the schools. One-man rule is poor preparation for self-direction. Absolutism is not a training for democracy. The general or community interest will not arouse affection if the individual's interest and sense of justice is never put into operation in relation to it. Moralisation of our citizenship depends on, among other things, a participation during the school period in weighing and deciding matters of dispute and infringement of rules.

4. Democracy in education requires that the needs of the

masses should be met. We have educated for the few and disregarded the many. The talented and the leisure class rather than the average, were in mind when courses of study were organised. Tradition commonly ruled and the burden of what had been useful laid its hand heavily on the present, crowding out the useful and the near.

Over 95 per cent. of the social energy of the nation is directly devoted to matters of getting a living.[1] Consequently a knowledge of the technical processes and skill, on which this life activity is based, must have a very large recognition in the schools.

Again, probably less than 40 per cent. of the children of the United States advance in education beyond the eighth grade, and about 50 per cent. are eliminated from the schools by the beginning of the seventh grade. This means that education must be useful and practical before all else; that what is to be done for individuals to equip them to carry on their life business competently must be done for them in the elementary schools. The best interests of the majority demand this. It is not a whim nor a fad; it is justice.

I. RURAL SCHOOLS

Deficiencies of Rural Schools.— The public school system is often referred to as the grandest educational system of the world. It certainly is a remarkable scheme for socialising the young individual. Yet our schools, and particularly the rural schools, are open to criticism.

1. They are wasteful. The scattered condition of the inhabitants has often made it necessary to place a very few pupils in a single school. In Virginia a few years since there were 150 schools that had six pupils or less. In the state of Maine in 1892 there were more than 1,000 schools with an average attendance per school of 12 pupils or less. The

[1] See the Author's "Vocational Education," pp. 109–112, where the computation is made.

superintendent of that state indicated that 800 of these schools could be abolished with advantage. Other states have reported as bad or worse conditions.

Recent investigations in North Dakota reveal similar conditions. Table 26 indicates this situation.

TABLE 31 [2]

COMPARATIVE STATEMENT OF AVERAGE DAILY ATTENDANCE IN RURAL SCHOOLS

Size of School	Number of Schools	Per Cent.
Four or less	152	3.9
Five	176	4.5
Six	217	5.5
Seven	269	6.7
Eight	329	8.3
Nine	343	8.7
Ten	400	10.1
Total of 10 or less	1,888	47.7
Eleven	295	7.5
Twelve	268	6.9
Twelve to 15	605	15.2
Fifteen to 20	560	14.5
Over 20	336	8.5
Totals	3,951	100.0
Average square miles to each school		15.6

The fact is evident that within certain limits, a large school, say of fifty pupils, can be maintained at the same relative expense as can a school of five. The teacher and the fuel are the chief elements of expense.

The same investigation into North Dakota conditions affords us a view of the relative expense of smaller and larger schools. Table 27 presents the facts.

2. Rural schools fail to educate in view of the surroundings. The business demands of agriculture are ignored, home-making and child culture have no place, consideration

[2] "Problem of the Rural School." N. C. Abbot, *North Dakota Teachers' Bulletin*, March, 1911, p. 2.

TABLE 32

DETAILS ON SCHOOL EXPENDITURES

Averages based on Actual Attendance	State as a Whole	Cities and Villages	Rural Districts	Village Consol. Schools	Rural Consol. School
Annual cost of tuition....	$42.44	$ 41.94	$41.54	$58.63	$57.14
Annual cost for teachers..	27.74	28.41	31.07	21.31	20.88
Annual cost for school officers	1.55	.49	3.43	.79	1.95
Annual cost for incidentals	13.08	13.04	7.03	12.13	8.97
Daily cost of tuition based on attendance	28.9	22.8	30.3	30.0	34.7
Average number of days school per pupil.....	94.6	160.8	70.0	1.39	1.05

of the community problems is absent, and the peculiar social and recreational needs of country neighbourhoods find slight recognition.

3. There is lack of stimulus among the pupils of the country schools on account of their small number. Competition enters into the life of education. A class of 12 to 20 will make more progress than one of five or less, because the members stimulate each other to greater effort.

4. The school term is too short to do good work. This tends towards the deterioration of schools both because it fails to advance the pupils as they should advance and it affords a very small inducement to capable teachers to carry on the teaching. Six or seven months a year with only a moderate monthly salary is not a large attraction for capable young men and women.

5. In many of the states the rural schools are conducted by teachers who are inefficient. They often teach as an appendage to other businesses. Or, more frequently, the young woman teaches only until her marriage.

The training of the teachers is insufficient. Many of the teachers in rural schools were but recently pupils of the

schools which they themselves teach. They start in with barely enough knowledge to get the lowest grade certificate, with scant knowledge of methods, aims of education, or nature of the child. Information from 22 counties and 16 cities of North Dakota corroborates the statement. The percentage of teachers in the elementary schools of the 22 counties who do not have the equivalent of a high school training, none being college or normal graduates, varies from 5 to 80 per cent.

Of the 262 grade teachers of 16 of the larger cities of the state reported upon, 250 are either normal or college graduates, and 7 more are high school graduates.[3]

From a study made by the Bureau of Education of the United States of the rural schools in 55 counties it is learned that 4% of the teachers have had less than eight years of elementary preparation, 32.3% have had no professional preparation whatever, and 20 teachers out of 2,911 report attendance at schools making a specialty of preparing teachers for rural schools. (The efficiency and preparation of rural school teachers, Bulletin 49, U. S. Bureau of Education, prepared by H. W. Foght.)

6. The rural schoolhouses are inadequate. There should be a place that is fitted to be a social centre. At present there are few such suitable buildings in the country. The schoolhouses are small and ill suited for such purposes. They are poorly built, have little or no ventilation, and are often badly located. They also fail to afford the rooms which the equipment and facilities for vocational training of boys and girls for the farm and home require.

Particular Demands of the Country.— What was said in the two preceding sections will serve as a background for the special demands on education which rural regions make. Modern demands as profoundly grip rural as urban inhab-

[3] "Is the Country Child Getting a Square Deal," Arland D. Weeks,— *The Extension*, Agricultural College of N. Dak., April, 1900, p. 4.

itants, though they are less intrusive and conspicuous. Some particulars of these requirements may be given.

1. Scientific agriculture should be an intimate part of the educational curriculum. This must be taken in its larger sense as including the topics we have treated previously. Farm management, crop and animal production, farm mechanics, construction and arrangement of buildings, appreciation of the conveniences and utilities on the farm and in the home, an understanding of the conditions of cleanliness and health, and an inculcation of ideals of taste and beauty; are some of the prominent subjects which demand attention. Good farming, good homes, and good neighbourhoods are dependent on their comprehension. The problem is to get these things understood by the masses. All the agencies now at work — agricultural colleges, United States Department of Agriculture, agricultural high schools, experiment stations, extension work, and farmers' institutes — are hardly touching the masses. Only an occasional farmer and farmer's son get the light.

As a factor in this enlightenment the use of agricultural reports and bulletins are important. The average farmer does not use the splendid literature which our government and the agricultural colleges send out to him. He is not fitted to read them and does not know how to obtain and to preserve them. Probably many of the bulletins are too technically written. But the schools have a task to perform in teaching the more mature children how to coöperate with government bureaus and agricultural institutions as to the use and the preservation of certain of the more practical and helpful literature.

2. Domestic science must be taught to the daughters of farmers. The high schools and elementary schools are responsible for giving women of the cities an equipment for conducting homes on a more economical and scientific basis. Welfare, happiness and health of the home demand this.

The task is being assumed by urban education. It is also recognised that this training must be given in the grades, as most of the girls go no farther with their schooling.

It is unquestioned that the girls of the country stand in need of such training, and that they have a right to it. Perhaps they participate in household work more than do their urban sisters and consequently know more of the current traditional household economy. There may be many excellent housekeepers in the country, but the fact remains that it sustains about as general a lack of improved housekeeping methods as the city.

The latest and most up-to-date farm machinery may be found at work in the fields, but anything is regarded as good enough for the house, and improvements there are considered as a wasted investment. The girls must be educated to better ways, to maintain their dignity and rights in the home, and to view their work as a social function for which they are sacredly and specifically set apart. The school must teach that the household activities are on a par with those of raising grain and stock. Home making, child-nurture, and child-culture lie at the basis of human society. Raising grain and stock is a means to an end. It is ignorance which permits it to be regarded as the greatest object and the home as incidental. Proper education of both girls and boys will go far to correct this distorted conception.

Girls need practical training in child raising quite as much as boys require teaching about agriculture. Chicago schools are now attempting to qualify the older children for the care of younger ones. Perhaps psychology of a mature sort, and the finer points of child study, cannot be taught to country children. But a better conception may be given of the requirements of motherhood; of proper foods and clothing for infants; of the deadliness of soothing syrup "dopes" and other drugs, of the periods of teething and the stages of physical development; of the changes in the mature

of foods required during the different periods of infancy; and of some insight into children's ways, interests and rights, so that indirect methods of control may supersede that of government by brute strength.

3. Special attention to the socialisation of country children must be given. This is coming to be recognised. Says President Henry Smith Pritchett, "The more one considers this whole question, the more fully one is persuaded that the problem of teaching the boy on the farm, training him into a successful agent for a new scientific business of farming and making him a factor in the conservation of resources, is inextricably connected with the larger problem of the betterment of social and economic conditions of rural life." [4]

The understanding of social and economic conditions is not a matter of light and incidental reading. The social viewpoint must be embodied in the educational process as a matter-of-fact, constant, and integral factor. It must be an atmosphere in which the developing minds live. The social outlook and impulse should become as natural as the individualistic to the developing child. The simplest phases of the social and economic problems of the neighbourhood should be grafted on to the curriculum. Some courses running through the elementary grades, which are called "social study" have been outlined.[5] These studies would make children acquainted with their social environment and give them some appreciation of the conditions, problems and requirements of community life. The present volume contains much of the matter which this socialisation involves.

It is to be observed that this socialisation is also a moralisation, for, as Professor Dewey points out, there is a vast difference between "moral ideas" and "ideas about moral-

[4] Fourth Annual Report of the Carnegie Foundation for the Advancement of Teaching, p. 106.

[5] Since this was written, North Dakota has placed such a course, prepared by the writer in the first six grades of its elementary schools.

ity," and what is now needed is the former. "We need to translate the moral into the conditions and forces of community life, and into the impulses and habits of the individual." [6]

School management will constitute a part in this process of socialisation. Self-government and self-control in school affairs involve the principles which are at the foundation of the larger community life. They impart the attitude and habits which will find realisation in mature affairs. Organised play, well conducted sports and games, and the social activities of the neighbourhood, are also important factors. Civics and history may be made more helpful by the elimination of much extraneous and irrelevant matter and the inclusion of matter of vital and current moment.[7] Discussions in current events are also vitally contributive.

Economic teaching of a simple, practical sort is imperative. Farm management and farmers' organisations for marketing the produce, principles of coöperation and its advantages, and an understanding of the place of agriculture among other callings in society form very essential topics of discussion. If farmers are to organise and coöperate the coming generation must be educated to an appreciation of the need and in the principles and methods of coöperation.

In equipping for farm life the other kinds of schools cannot reach the mass of people who need reaching. All the public schools of the nation put together hardly accomplish this. "In New York State, for example, there are some fifty-five agricultural counties. If each of these counties had an agricultural high school graduating fifty pupils each year, to give only one boy from each farm in the state an agricultural course would require eighty-two years; and new generations are coming on in the meantime." Moreover, the separate trade schools are likely to endanger the exist-

[6] John Dewey, "Moral Principles in Education," pp. 57–58.

[7] See "Reconstruction of History for Teaching Purposes," J. M. Gillette, *School Review*, October, 1909.

ence of our common schools from the very fact that they teach the essentials of living better, will thrive, become duplicated and ultimately exterminate the latter.[8]

4. Procuring a resident rural leadership is one of the most important considerations in rural life. It is a part of the educational situation because the schools must develop it.

(1) It is the opinion of competent observers that there is a dearth of rural leadership. "The rural people are not lost; they need opportunity and leadership. So far as possible the work should be established in real rural regions, outside the towns."[9] "Fundamentally it may be said that the problem of the farm and of the improvement and conservation of the soil is clearly one of calling for leadership of a high order. . . . It is more difficult to distribute the fruits of science, to make them effective instruments in the hands of the great multitude, than it is to win them at first hand. How to bring to the rural population of the United States technical and financial efficiency, together with social contentment, is perhaps the most difficult problem of our democracy."[10] The Country Life Commission likewise recognises the deficiency.

Since country youths are being educated in great numbers in the higher institutions of learning it might be supposed that a developed resident rural leadership would result. An investigation as to what becomes of these students and graduates led to the conclusion that accepting attendance upon a long course of instruction in, or graduation from, a normal school, an agricultural college, or a university as a sign of leadership, relatively little of the products of the normals, a majority of those of the actual farming courses of agricultural colleges, and practically none of the products of the universities whose origin was the farm, return to farm life, although a small per cent. of those from normals and uni-

[8] Bailey, "The State and the Farmer," pp. 154–59.
[9] *Ibid.*, p. 87.
[10] Pritchett, *op. cit.*, p. 107.

versities settle in semi-urban communities.[11] It is thus seen that the country is being robbed of its educated leadership by the city.

Nor is there much hope that the educated element from these institutions can be retained in the country. Universities do not consider it their problem. State normal schools are doing something in agricultural training but their graduates and students do not largely go into real country work. Bona fide agricultural courses constitute but a fraction of the educational effort of agricultural colleges, at least of those independent of state universities. Of the graduates from these courses the far larger portion go into government work, experiment station work, teaching of agriculture in colleges and high schools, and agricultural publication work. The situation does not promise to change within many years. We must expect a supply of leaders from some other direction.

(2) A consideration of the necessity for a leadership in society generally indicates its importance in rural affairs. It is an established sociological teaching that the vast majority of people are imitators, not originators. They are thus conservers of what already exists rather than creators of new methods and conditions. The problem of civilisation is to develop a larger proportion of inventors and talented individuals. Potentially, there is a far larger proportion of able men and women than is commonly supposed. But they are undeveloped in ability and remain inert and unproductive. Even good imitators, individuals who know what is being done in society elsewhere and who are able to get it done in their own community are relatively rare. The problem of the country is, therefore, to educate a greater proportion of the "born" talented into creators and originators; and to train a larger number of "born" imitators up

[11] *Quarterly Journal of the University of North Dakota*, October, 1910, p. 76.

to a stage of intelligent appreciation of community welfare work, and of leadership in realising it in their own community.

(3) Rural progress calls for leadership. A rapid improvement awaits the development of an intelligent resident rural leadership. Good farmers who are successful in farm management will be called on to arouse others and show the way. Those who know best how to raise grain or cattle must be depended on to lead in inciting others thereto. If prices of produce are to be raised and cost of commodities purchased are to be lowered through coöperation some larger spirit must take the initiative. If churches are to be improved and education adjusted, farmers, preachers and teachers of larger vision and dynamic type are requisite to secure neighbourhood coöperation. The task of securing this qualified leadership is gigantic and rural improvement, in view of its scarcity, almost appears as a remote dream.

(4) The rural schools have been part cause of the drift of leadership from the country. They educate away from country life. They have remained so inert that they not only stand aloof from the interest and life which surrounds them, but in subject matter and in ideals given through the subject matter the influence and stimulus are away from farm life. How much of the farm, farming, country life, and lives of "hero" farmers get into reading lessons, histories, geographies, etc.? Ideals are formed out of what the mind feeds upon. If all the facts and persons studied are chosen from non-agricultural communities, why should not the aims and ambitions of country youth centre in the world that is important enough to be put into their books, their schools, libraries, their "education"?

An experiment has been tried in Iowa which shows the influence the subject matter of the rural schools actually has on determining the future residence and calling of the pupils. In Wright County, Iowa, the question, "What do

you want to do in life?" was asked the boys and girls in 34 schools before and after the introduction of agriculture and home economics. At the time the question was first asked, of the 164 boys in the 34 schools, 157 wanted to leave the farm; of the 174 girls, 163 wanted to leave. After agriculture and home economics had been taught in those schools during three years the returns to the same question were quite different; 162 of the 174 boys and 161 of the 178 girls indicating a desire to stay on the farm.[11a]

The general reading matter of the community also directs away from farm life. The farmer must read for knowledge, inspiration and courage, and to obtain mastery over conditions, or he is subdued and repelled. There is very little literature that is specially adapted to rural life. The Bible is commonly read from the point of view of "texts" and needs to be interpreted and adjusted to present conditions. Novels have no special relation to conditions under which farmers live. There are few good ones depicting the real farmer. They are likely to be caricatures in types of agricultural life and vocabulary. There are practically no good poems of farm life. Those which are written are from the library or study point of view.

The nature books are largely forced and lack personality. There is no history of farm life or farm people. Biographies are those of persons who have made their way in other careers.[12]

The general attractiveness of city life, the cleaner and more definite pursuits, the larger business inducements and other allurements, also operate to draw young ambitious persons to the cities.

(5) It is evident that a permanent rural leadership must be developed in country regions and institutions. These in-

[11a] *The Extension*, N. Dak. Agricultural College, Feb., 1914, pp. 17–18.

[12] L. H. Bailey, "The Training of Farmers," pp. 37–45.

stitutions must be centred in the interests fundamental to farming communities. They must impart a knowledge of the technical processes of farm and home, inspire a love and loyalty for farm life, and infuse ideals of heroism and attainment which are not foreign to the country and which will not have to be imported to the city to be realised.

While the teacher and preacher may be looked to for leadership in certain directions they cannot be expected to identify themselves with rural interests so long as they are fleeting residents. The member of the community on whom the permanent and full responsibility for inspiration, guidance, and wise counsel regarding the general social interests rests, must be the farmer. If he does not meet it no one else can or will. He is most interested, has most at stake in every respect, is a life resident, and for these reasons in addition to others he cannot hope to deputise outside persons to do the work. The institution which trains him to this competency and responsibility must be within his reach. It must be available to all the country residents so that all may have their abilities developed. The rural school must be so improved and developed that it can meet the demand.

5. We have shown the general necessity of rural social centres in past connections.[13] The arguments need no reiteration. We take it for granted that such centres must be established. They should afford satisfaction for every legitimate social desire of the community — play, games, sports, contests in athletics, recreation for the different ages and sexes, amusements suited to all, entertainment which is wholesome, dispensation of information, clubs, and organisations.

Much real education in a most entertaining form which would draw the old and young alike could be secured and dispensed by means of motion pictures. A catalog of a film-renting firm illustrates the diversity of educational

[13] See previous chapter.

topics which motion pictures make available. Thousands of films are listed under such general department titles as Agriculture, Applied Science, Fine Arts, Literary, History, Religious, Military, Natural Science, Railroads, Sports, and Travel, which may be rented for a small fee.

The church, as we saw, may become a social centre if it secures high class, wide-awake leadership. That it will do so soon or that such a church centre will be available generally is not probable. The matter cannot be left to such voluntary agencies. Its importance makes it requisite that the community, as a public-minded legal entity, should take the responsibility of establishing and maintaining such an institution. The institution must be democratic, must be available every day in the week, and must guarantee a competent leadership. The church cannot be regarded as the most democratic and ubiquitous clearing house for the social interests of rural communities. Sectarian division, and traditional views as to certain social pastimes, such as dancing, render it impotent to become the democratic institution which the situation demands. The school is the only rural institution which is present in every community and which can be ordered and manned to meet these requirements.

The promise and the actual fulfilment lie in our state and educational agencies. The state educational system is responding to the needs. The schools in many cities are fulfilling the requirements. They are real centres of neighbourhood activities. Municipalities either in connection with schools or small parks are maintaining social centres by public taxes. The state educational system of certain states is undertaking the establishment and direction of playground and social centres. Wisconsin is an example. Its university has established a department of training for this work, and has an extension division and director which organises centres in the communities of the state. In time the educational system, in its normal schools and other training places

for teachers, must respond, and send teachers into rural communities who are trained to meet the needs. Appropriate school buildings and grounds must be created.

The Consolidation of Rural Schools.— The greatest hope for a general and thorough betterment of rural social conditions lies in the consolidated school. It is no longer an experiment, having been tried for a score of years in Ohio and in all parts of the land. Its full harvest of beneficial results has not been reaped because in both educational and social directions ideals of what ought to be done are just appearing. Enough in these directions has been secured to insure the formation of more competent plans and methods. Some of the benefits are presented.

1. The consolidated school supplies the social clearing house and social centre needed in rural communities. We have seen that the school is the only completely democratic, non-sectarian, universal and permanent institution rural regions possess. But the small one-room buildings have incapacitated them to act as social centres. The consolidated school, with its larger building and grounds established for social as well as educational objects, serves as a competent agent. Its social serviceability is seen in the case of the children while in school.

"In the consolidated rural school all children from the entire township or district meet, mingle, compete, strive, make friendships, and learn how to work together. The school is free and accessible to all children within its jurisdiction. All the boys and girls, including those attending high school, return home daily, and, doing their allotted work or chores mornings and evenings, keep in touch with the home, the farm, and all its affairs, and remain within the shelter of home during the most impressionable period of their lives. There is no longer so much occasion for part of the children to attend distant boarding schools or to pay board in the near-by villages to attend high school. Class

distinctions, which the old district school unconsciously fostered, are broken down and removed." [14]

In securing an effective play centre it is worth its cost. Play cannot be organised with the one-room school. There are not enough children of a given age, and frequently not enough all told, to have a baseball or football game, or any other which calls for considerable numbers. Small schools are stupefying in their lack of opportunity for organising activity. Of the Green township, Ohio, consolidated school Mr. Kern says, after a visit: "On the playground all the big boys of the township play baseball. Think what it is to get all the boys of a township — country boys, I mean — on one playground. There will grow up a unity, and each boy having studied and played with other boys of the entire township, will be stronger for it. When the boys and girls of Green township compete with those of Gustavus township in football, baseball, or in literary contests, on athletic ground or in townhall, each team will have the backing of an enthusiastic township." [15]

The advantages to the adults of the community are secured by having commodious and comfortable homes in the consolidated building for their clubs, organisations, and social activities. The Government report on consolidated schools exhibits cuts of various buildings which range in price from $5,000 to $20,000, and any of them could be made to afford quarters for community purposes. Some of them are splendid looking buildings architecturally, structures a neighbourhood would be proud of. As yet the social feature has not entered largely into the plans and arrangements of such school buildings. The community needs should be met in their arrangement.

[14] George W. Knorr, "Consolidated Rural Schools and Organisation of a County System," *U. S. Experimental Station Bulletin*, No. 232, p. 32.

[15] "Among County Schools," p. 260.

2. The educational advantages of consolidation are obvious. (1) Better grading with its advantages would be secured.

Three teachers could take charge if districts were consolidated into schools of one hundred, one having about 70 pupils and the others the upper classes. If 70 is too many for the first teacher, which undoubtedly is true, then more could be given to the teacher of the upper class and her number reduced.[16]

(2) There is the stimulus which is obtained from numbers. A moderately large school is more successful than a very small school, by reason of the institutional spirit which it begets and the spirit of competition and rivalry which will exist between classes and between members of the same class. All of this creates a healthy condition which stimulates work and often makes a dull, stupid boy or girl a bright energetic individual.

(3) The school year will be longer. As it is now, some strong districts have a long term and the weak districts have a short term. Under consolidation experience shows that much longer school years are sustained and that the attendance is increased and is more regular.

(4) Consolidated schools afford the rooms, equipment, grounds, distribution of time, and specialisation in teaching force which are required to modernise and adjust education to rural needs. Agriculture is taught in conjunction with a small demonstration farm of five or ten acres, which is a part of the school plant. Manual training and domestic science are provided in the basement or other suitable rooms furnished and equipped for those purposes.

(5) Better supervision of schools and more highly qualified teachers are secured. Mr. Knorr found this to be the case in Ohio. "The data from these Ohio schools represent fair averages and reflect general conditions quite accurately. Of the twenty-four teachers employed in the three district-

[16] W. T. Harris, *Educational Review*, Vol. XIV, p. 207.

school townships, one was a graduate of a normal school, seventeen of high schools, two of academies, one of a district school and three were professional teachers of twelve, twenty, and twenty-four years' experience — previous training not stated.

"The three consolidated-school townships employed three principals, three high school assistants and nine elementary school teachers, a total of fifteen. The principals were graduates from colleges and normal schools; one had specially prepared to teach general science. Of the assistant teachers, five were either college graduates or had two or three years of college work to their credit; two were graduates from normal schools; two from academies and two from high schools; nine of the fifteen had normal school training." The consolidated schools demanded two years' experience for teaching, the district schools none.

Supervision is obtained by the daily visit of the principal to the class rooms, whereas the county superintendent sees the district schools but once or twice a year. The latter can make his work more effective in the visitation of sixteen to twenty-five consolidated schools than in one hundred or one hundred fifty district schools. The principal of the consolidated school relieves the teacher of much of the discipline, making her school work more effective.[17]

(6) Country pupils may have the advantage of high school education, as many consolidated schools sustain from two to four years of high school work. This increases the number of those who avail themselves of high school privileges. Mr. Knorr writes: "The per cent. of the school population attending high school in the unconsolidated townships was only 2.2 as compared with 12.4 per cent. in consolidated townships." One out of thirty-six pupils in the former and one out of six in the latter attended high school.[18]

(7) The much needed leadership in rural communities is

[17] *Op. cit.*, pp. 61–62. [18] *Op. cit.*, p. 29.

bred and secured. Pupils who secure an adjusted education right in their home schools will remain at home to use it. The increased high school attendance prepares a larger number of educated men and women to assume the direction of affairs. The teaching force becomes an available asset to the community in this direction. "The consolidated school encourages permanency of residence of principal and teachers; it attaches them to the school, begets loyalty and enthusiasm, and makes possible the formulation of long-time plans. The resident principals and teachers often take the leadership in social and literary activities, and, having become a part of the community, set an example of citizenship for all the children. Through contact with parents, as well as with children, they learn the character and home life of the latter quite as intimately as those in district schools, and much better than those in town and city schools." [19] Where normal schools and colleges give them a social outlook and an understanding of rural neighbourhood problems much in the way of leadership may be expected of this teaching force.

It is possible that direct educational effort to qualify leadership may prove serviceable. Courses to train rural teachers to promote rural undertakings are now being projected. The summer school of the State Normal School, Valley City, N. Dak., undertakes such a programme during the 1914 session. The courses will consist in developing programmes and methods of rural social activities, recreation, neighbourhood events, pageants, etc., suitable to country communities.

3. Much is being done in various directions to improve the rural elementary schools. The establishment of the office of the state rural school inspector and state aid for standardised schools is proving a strong factor for their betterment. Providing for the recreation of "county farm-life schools," as has been done in North Carolina, promises to do much to draw the farm and the school together in mu-

[19] Knorr, *op. cit.*, p. 61.

tual helpfulness. State legislatures all over the nation are appointing commissioners to investigate rural education with a view to its improvement and passing laws to stimulate and improve it.

In 1911 the status of elementary agriculture among the states was as follows: States which require instruction in agriculture in the common schools are Alabama, Arkansas, California, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, Tennessee, West Virginia, and Wisconsin. Those that require agriculture in the rural schools are Missouri, North Dakota, Ohio, and Texas.[19a]

Thus it is seen that at the time of the report very few states had made provision for compulsory agricultural training in the schools of the farmers, and even in the states which do compel such instruction the greatest difficulty is found in obtaining teachers who are trained in agriculture and who have the intelligence in the work of teaching it which will make it highly serviceable. This problem cannot be solved and no great improvement can be expected until the schools which are responsible for training teachers for the common schools are multiplied and devote far more attention to rural school instruction.

4. There can be little doubt that the consolidated school is the most economical system of rural education. The better social and educational benefits it yields is the guarantee of its value. It should not be promoted solely on the grounds of financial saving. Where it has been established as a settled part of community life the citizens of the community would resent the imputation that the object of consolidating was cheaper rather than better schools. In many cases consolidation has resulted in an actual financial advantage. Thus, in Lagrange county, Indiana, with consolidation in eight townships, Mr. Kern writes: "It appears that the transportaion of four hundred and twenty-eight children made possible the closing of thirty-eight schools, a reduction

[19a] U. S. Ed. Rep. 1911, Vol. I, p. 344.

of twenty-four teachers, and a net saving of $6,734.74." [20]

On the other hand, the comparative table of the attendance and cost of district and consolidated schools in North Dakota indicates a larger expenditure for the latter.[21] Mr. Knorr's investigation indicates that consolidation usually means a slight additional cost per pupil. "Under the stimulus of public conveyance more children attend and do so more regularly, and that adds to the cost of conveyance." He also points out that where district schools raise their standards of teaching to approximate that which obtains in consolidated schools, the increased cost raises their cost of administration so as to equal and even exceed that of the latter.

Education in agriculture and household economy should make country men and women much larger producers and conservers. This stimulus to production would far more than offset any increase of expenditure which consolidation entails. Considering its social, educational, leadership, and financial aspects, consolidation of rural schools may safely be pronounced to the best educational system and to offer the largest prospects as a means of community improvement.

II. HIGHER EDUCATION

High schools, normal schools, agricultural colleges, and universities may be regarded as higher educational agencies.

High Schools and Universities.— The first and the last of these institutions have until recently made very little effort to reach country needs. The universities which do not have agricultural colleges as departments have catered to urban and mining professions almost exclusively, manifesting little interest or responsibility for the condition of the great farming occupation. The high schools, many of which exist in country districts, have been so bound by educational traditions that they have not properly responded to rural exi-

[20] "Among County Schools," pp. 250–251. [21] See Table 27.

gencies. In some states the high schools have maintained professional subjects for preparing students to teach in country schools. Outside of this little consciousness of their larger mission existed. Agricultural topics were tabooed, although domestic economy was taught in some of the larger cities in agricultural regions.

In the nature of the case state universities located in states which maintain separate Agricultural Colleges can do little to help rural education directly. But they may do much to stimulate interest in rural questions and to develop a citizenship in all walks of life which will exert a sympathetic and helpful influence in behalf of rural school betterment. Indeed the attitude of Universities has undergone a marked change and many of their presidents and professors are devoting much attention to agricultural questions.

Likewise it is evident that secondary schools are taking a larger part in instruction in agricultural subjects. Thus "according to the most reliable information obtainable, there were more than 2,000 high schools teaching agriculture in 1911–12. Of this number about 360 were giving courses of two or more years in length. This list includes 46 state schools of agriculture, 40 district schools, and 62 county schools. There are also 16 departments of agriculture in high schools reported.[21a]

Requirements for teaching agriculture varies considerably among the states which have laws on the subject. The provisions for secondary instruction by states are as follows: "States requiring instruction in agriculture in rural high schools only: Idaho, Pennsylvania, Utah. States giving aid to special agricultural schools: Alabama, Arkansas, California, Colorado, Georgia, Massachusetts, Michigan, Minnesota, Nebraska, New York, North Carolina, Oklahoma, Pennsylvania, Vermont, Virginia, Wisconsin. States giving aid to departments of agriculture in high schools:

[21a] U. S. Ed. Rep., 1911–12, Vol. I, p. 267.

Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, New York, North Dakota, Texas, Wisconsin.

States in which secondary schools or secondary courses in agriculture are maintained by the State Agricultural Colleges in addition to the collegiate courses: California, Colorado, Connecticut, Florida, Georgia, Idaho, Kansas, Kentucky, Louisiana, Maine, Maryland, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, West Virginia, Wisconsin.[21b]

As in the case of elementary schools there is a great dearth of competent teachers of agriculture in these schools. The meagre preparation originally required, now that the instruction may cover several years and pertain to various subjects, in a specialised manner, are no longer sufficient. Recently the idea has spread rapidly of establishing professorships of education in agricultural colleges and professorships of agriculture in colleges of education and normal schools. The provision of Congress to give to land-grant colleges $25,000 a year to train teachers of agriculture and mechanic arts will doubtless do much to create a supply of well trained secondary school instructors.

Normal Schools.— State normal schools are making some attempt to equip teachers with a knowledge of agriculture. Information obtained indicates a growing consciousness of the responsibility. Some normal schools have courses in agriculture and maintain a small experimental farm or garden to make the work as real as possible. In certain cases instruction is given in rural school matters. Certain normals not only support an experimental and agricultural course but maintain an instructor who devotes his attention to rural school problems.

[21b] U. S. Ed. Rep. 1911, Vol. I, pp. 344–5.

It is unfortunate that these institutions do not give more serious attention to sociological matters. Some maintain weak courses in economics and civics given by poorly equipped men, and an occasional normal devotes a short term to sociology. Professor Clow has shown that the tendency to sociological courses is gradually rooting into these institutions. He also writes convincingly in behalf of thorough work in sociology as giving the proper foundation for teaching. It is highly desirable that normal schools devote special attention to rural social problems in training the students who expect to teach in the country.

Collected facts indicate how few well-trained teachers locate in rural districts. They prefer to teach in cities at little better wages and with greater expense to themselves. The normals may do two things to send more teachers to rural schools. First, make special effort to establish an educational and social interest in rural life on the part of normal students generally. Second, differentiate the instruction given in the normal so that there shall be a special rural school normal course. These things would induce more persons to devote themselves to rural education and so qualify them for it as to endow them with special fitness, devotion and permanency for the work.

That normal schools are hardly touching the demand for trained rural teachers is denoted by such facts as these. In 1909 Minnesota required 3,000 elementary teachers and its normal schools graduated but 690 students. The only public normal school of Iowa in 1911 granted 308 degrees and certificates of all kinds, whereas the demand for teachers is over 60 per cent. greater than that of Minnesota. In 1911 Missouri's normal schools certified about 750 teachers and its demand is 20 per cent. greater than that of Minnesota. New York's 15 normal schools graduated 1,811 students in 1912 to fill the vacancies in a body of 45,000 teachers; Pennsylvania's 15 normal schools sent out 1,925

teachers for the vacancies occurring among 35,000 teachers.[22] When it is remembered that the cities more than consume this number of teachers yearly it is evident that the country must do without well trained teachers.

But the normal schools are beginning to take action to render some assistance to the country districts. In 12 states agriculture is a requisite to secure a teacher's certificate.[22a] This, with the "demand in other states for instruction in agriculture in elementary schools, consolidated rural schools, and rural high schools, has forced many of the normal schools into offering courses to fill the demand. Of the 185 state normal schools in the United States, 104 offered courses in agriculture during the past year; 6 others, courses in school gardening; and 12, not counted in the 110 preceding, in nature study."

"The majority of the courses offered are brief, extending from 4 to 12 weeks. A considerable number offer a full year's course and the North Adams (Mass.) State Normal gives a three years' course." [22b]

Agricultural Colleges.— The agricultural colleges are the institutions which we should look to for the greatest devotion to farm life both in aim and training activity. We must frankly recognise the good they have done in the direction of improved agricultural production. That they have risen to the height of their full opportunity does not appear. First, they have failed to recognise their true mission, the place they should occupy and the exact work they should do, as institutions among other kinds of state educational institutions. That their mission is not clear to their own managements is indicated by their constituency. "Not only do the strongest of them contain great numbers of secondary school students, but the institutions themselves represent a mixture

[22] U. S. Ed. Rep. 1912, I, 122.
[22a] *Ibid.*, 1911, p. 344.
[22b] *Ibid.*, 1, 367.

of many separate educational efforts, in which the ordinary college and the school of technology predominate." [22c]

Replies to a questionnaire indicate that in states where the agricultural colleges are parts of the state university, the larger portion of their students are from the country; while in those states where these institutions are separate from the universities the larger portion of their collegiate students are urban. Again, as to the work their students eventually engage in the data show striking contrasts between the two classes of institutions. New York and Illinois colleges are types of the first class. Replies as to the number of students who settle in the country supply the facts. The reply from Illinois states that a record of some 226 graduates shows 55 per cent. are farmers, 40 per cent. are in agricultural colleges, experiment stations, agricultural publication, agricultural department work, etc., making a total of 95 per cent. who are direct and indirect agriculturists. New York reports that 71 per cent. of its former living students are in some form of farm work, and 20 per cent. in some form of agricultural education.

The case is decidedly different with the students and graduates of separate agricultural colleges. In Iowa and North Dakota those institutions are separate from the universities of those states and maintain, besides the agricultural courses, courses in mechanical, electrical, mining and civil engineering which are largely attended. Most of the students of those non-agricultural courses never intend to take up farm life nor do the courses articulate in any vital way with agricultural interests. Thus in Iowa in 1909 out of 226 graduates but 56 took some course relating to agriculture; and out of 1,160 graduates whose occupations were known, 275 were directly or indirectly connected with agriculture, 132 of the 275, directly. Of the 776 students in the Agricultural Col-

22c "Fourth Carnegie Foundation Report," p. 97.

lege of North Dakota in 1909–10, but 98 were pursuing long courses leading up to farming.[23]

President Pritchett says: "The college of agriculture and mechanic arts has imitated mainly the old arts college and the school of technology. In very many cases the engineering side has run away with the agricultural side, and in practically all of the agricultural colleges to-day it entirely overshadows in numbers and in influence the college of agriculture."[24] Besides this traditional imitation because of no clear conception of their missions, the separate institutions have had political reasons for seeking to build up large student bodies, whatever their source, destiny or kind of instruction. Early in their careers the farmers fought shy of them. In consequence the agricultural and mechanical colleges resorted to all kinds of devices to get students.[25]

The fact remains that they have hardly touched the situation. "It is clear that the agricultural colleges, working as they are to-day, will not in a hundred years reach the men who must be taught practical farming. The conservation of the resources of the soil has steadily deteriorated in most states, notwithstanding the existence for forty years of these agencies."

Second, these institutions have failed to recognise the social character of the rural problem. It might have been expected, that above all educational agencies, they would have seen that the improvement of farm life, of leadership, and the general enlightenment of the population on fundamental economic and social matters, are means and conditions of securing improved production. Only recently have agricultural college men assumed an aggressive leadership in any of these matters. Only a few institutions give anything like adequate instruction in these phases of farm life. The

[23] *Quarterly Journal, University North Dakota*, October, 1911, pp. 75–6.

[24] *Op. cit.*, p. 100.

[25] Pritchett, *op. cit.*, p. 103.

sciences of government and economics are usually backward in agricultural institutions, have little application to rural conditions, and sociology of any sort is almost unknown. Yet these are the sciences which must be depended on to give the information and point of view which are needful to create an intelligent leadership, and instructional staff for lower grade institutions.

Additional Requirements.— In addition to what has been said about the improvement of high and normal school instruction to meet agricultural needs it is evident that other things are required. First, the agricultural colleges must recognise their mission and devote themselves to its accomplishment. Such an institution would be "A college of agriculture associated with an experiment station and starting from the same entrance requirements as other college departments. Such a college would train leaders in agriculture, the managers of great agricultural plants, teachers of agriculture, and the like. This conception would be fulfilled by an agricultural college pure and simple, whether a part of a university or whether a separate agricultural college." [26]

Second, adequate means must be taken to train men for the occupation of farming by institutions which are closely associated with the farm neighbourhood. "If we are to train men for the thousands of positions which are to be filled in every state in the practical operation of farms, we need not one agricultural college, but many agricultural trade schools; and to bring about this result we need to keep closely in mind the distinction between an agricultural trade school and an agricultural college." Wisconsin and Minnesota are leading in this direction. Wisconsin has established four agricultural high schools and will erect others. It is likely that the trade school work will be turned over to these schools. This work in the university has been separated from that of the agricultural college and given to a special staff of second-

[26] Pritchett, *op. cit.*, p. 98.

ary school instructors. In Minnesota a separate school of agriculture has been established near Crookston which is practically on a trade school basis.[27] In addition to this it "has just enacted a law by which any high school which will add a department of agriculture that meets the requirement of the State Board of Education may draw upon the state funds to the amount of twenty-five hundred dollars annually, the number of schools being limited to ten additional for each year. Over sixty made the first application, many of which are going on with their plans independent of state aid."

Dean Davenport of the School of Agriculture in Illinois holds that the next place to teach agriculture is in the high schools. He indicates that the demand for teachers of agriculture in high schools has been greater than the supply, that it is less than two years old, and that secondary agricultural education wherever tried has been a great success.[28] Such schools are not technically trade schools but they afford a vocational element.

It has already been amply shown that the rural schools must be depended on to reach the masses of the farming population.

Extension Work.— It is being recognised that extending the opportunities of continued education to the people of the state who have ceased to attend the schools and higher educational institutions is an obligation resting on higher institutions of learning. The universities are coöperating with the people of the state in this direction. Generally they confine their efforts to giving instruction by correspondence courses in college work and professional subjects. However, they are broadening their mission. A few institutions offer correspondence work to all ambitious inhabitants of the state, and send lecturers on practically any subject into communities which desire them. The scope of university extension

[27] Pritchett, *op. cit.*, pp. 99–101.

[28] E. Davenport, "Education for Efficiency," Chap. 7.

work is constantly broadening and augurs well for the future. As yet it has accomplished little of direct results for farm communities.

The extension effort is the most significant recent development of agricultural colleges. "It is an attempt to put the college in the way of aiding every man to help himself on his own farm. In this effort they have gone farther than any other institution and they are setting an example for all institutions." It "includes all affective personal acquaintanceship with the farmers of the state; all inspection of farms that is not legal and police in character; the giving of advice by correspondence; publication of an educational nature; coöperation with societies and organisations; advisory and coöperative work with schools; the organising of boys' and girls' clubs in schools and country districts; the conducting of reading courses for farmers, farmers' wives and rural school teachers; experiments and demonstrations on farms; holding of 'farmers' weeks' and other conventions; lectures, itinerant schools, and the like; and all species of helpfulness and advice to the people on the land. The extension department of a college of agriculture should be a means of arousing the country people, and then of helping and guiding them."

Professor Bailey regards the institute as a permanent means of reaching the farmers from agricultural colleges. "We must develop a new type of institute man,[29] unlike the college professor on the one hand and the so-called practical farmer on the other." Such men must have special training in and close contact with the colleges, and live on the land a part of the time; and should be farmers as well as students.

[29] During the year 1911 various North Dakota associations for the improvement of farming have placed in the field men of the above type. The same plan is to be executed in expending the million dollar fund to improve farming which was created by the Sears, Roebuck & Co., of Chicago, in May, 1912.

Teaching on farms is likewise important. It carries the laboratory method to the farmer. "A man's farm is his laboratory. No one may direct him how to manage his farm; but a good teacher coming to his place may set him into new lines of thinking and put him in the way of helping himself." [30]

REFERENCES

On General Sociological Demands

"Vocational Education." J. M. Gillette, Div. II, "Social Demands on Education," pp. 109–112; and pp. 217–222; "Reconstruction of History for Teaching Purposes," *School Review*, October, 1909; "City Trend of Population and Leadership," *Quarterly Journal* of the University of North Dakota, October, 1910, pp. 67–79; "An Outline of Social Study for Elementary Schools," Course of Study for the common and graded schools of North Dakota, 1912, pp. 131–138.

"Report of the Committee on Industrial Education in Schools for Rural Communities to the National Council of Education," pp. 10–20; and p. 53.

"Proceedings of Annual Farmers' Institute Workers," 1910. *Bulletin*, U. S. Experiment Station, No. 1910, pp. 16–19.

"Social Science Outlines," J. B. Welch, *Elementary School Teacher*, May and December, 1906.

"Social Study Outlines." "Reports of the Committee of Seven, North Dakota Educational Association," 1909 and 1911, pp. 10–24, and pp. 43–47.

"Moral Principles in Education." John Dewey, pp. 57–58.

"The State and the Farmer." L. H. Bailey, pp. 87–107.

"The Training of Farmers." L. H. Bailey, pp. 37–45.

"The Religious Possibilities of the Motion Picture." Herbert A. Jurrep, New Britain, Conn., p. 16 ff.

"Fourth Annual Report of the Carnegie Foundation," p. 106.

"The School and Society." John Dewey,

On Adjustment of Education to Rural Needs.

"Problems of the Rural School." N. C. Abbott, *North Dakota Teachers' Bulletin*, March, 1911, p. 2.

"Report of Committee of Twelve on Rural Schools."

"The School and Society." John Dewey, p. 29.

"Is the Country Child of North Dakota Getting a Square Deal?" A. D. Weeks, *The Extension*, Agricultural College, North Dakota, April, 1909, p. 4.

[30] "The State and the Farmer," p. 17 ff; and "The Training of Farmers," pp. 252–256.

Fourth Annual Report of the Carnegie Foundation, "Agricultural Education," "The Future of the Agricultural College," and "The Training of the Farmer." H. S. Pritchett, pp. 97–107.

"Chapters in Rural Progress." K. L. Butterfield, Chaps. 6 and 9.

"Education for Efficiency." E. Davenport, Chaps. 7, 8, and 9.

"The State and the Farmer." Bailey, pp. 154–155 and p. 170.

"The Training of Farmers," pp. 252–256.

Education, Vol. XLV, p. 304; March, 1897, p. 418.

Educational Review, Vol. XIV, p. 207.

Perry, Clarence A. "Wider Use of the School Plant."

Education, 31; 529–35; "The Ruralised College." Proceedings North Dakota Educational Association, 1909.

"Education From the Ground Up." *World's Work*, March, 1909, pp. 11309–10; "Farmers' Children Need Farmers' Studies." Clarence H. Poe, same, August, 1903, pp. 3760–2.

"What Agricultural Communities Should Teach." *Survey*, May 1, 1909, pp. 162–3.

"Learning by Doing." For the farmer boy. Supt. O. J. Kern, *Review of Reviews*, October, 1903, pp. 456–61.

"How May the Rural Schools be More Closely Related to the Lives and Needs of the People?" D. J. Crosby in N. E. A. reports, 1909, p. 970.

"The Present Status of Agricultural Education in Public Schools." E. C. Bishop, State Supt. of Nebraska in N. E. A. reports, 1909, pp. 97–84.

"Annual Report of Minister of Public Instruction, New South Wales, Australia," 1908, pp. 18, 19, 36.

"The Exploitation of Pleasure." M. M. Davis. Russell Sage Foundation, No. 84.

"Evening Recreation Centres." C. A. Perry. Russell Sage Foundation, No. 85.

"Play and Playgrounds." Joseph Lee, American Civic Association, Leaflet No. 11 — second edition.

"The School Garden." L. C. Corbett, *U. S. Farmers' Bulletin*, No. 218.

"Agricultural Instruction for Adults in the British Empire." John Hamilton, same, No. 155.

"School Gardens." B. T. Galloway, U. S. Experimental Station *Bulletin*, No. 160.

"Forestry in the Public Schools." H. A. Winkenwerder, U. S. Forest Service Circular, No. 130.

U. S. Ed. Rep. 1911 and 1912.

G. H. Betts. "New Ideals in Rural Schools."

Kennedy, Joseph. "Rural Life and the Rural School."

Foght, H. W. "The Efficiency and Preparation of Rural School Teachers," U. S. Bureau of Education, Bulletin 49.

Sci. American, June 4, 1913, "Agriculture in the High Schools."

On Consolidation

"Consolidation of Rural Schools and Organisation of a County System." Geo. W. Knorr, U. S. Experiment Station *Bulletin*, No. 232.

"Among County Schools." O. J. Kern, Chap. 12.

"The American Rural School." H. W. Foght, Chap. 15.

Journal of Education, Vol. XLV, p. 412 ff.

Educational Review, Vol. XIV, p. 207.

"Problem of the Rural School." N. C. Abbott, *North Dakota Teachers' Bulletin*, April, 1911, p. 2.

"The Consolidation of Rural Schools in North Dakota," C. C. Schmidt, *Univ. of N. Dak. Departmental Bulletin*, Oct., 1912.

CHAPTER XIX

RURAL CHARITY AND CORRECTION

I. CONDITIONS IN THE COUNTRY

In Chapter 6 statistics appeared of the comparative amount of pauperism and crime in city and country. They confirm the statement that the country is relatively immune from the vice, crime, and pauperising conditions of the cities. Yet there are sufficient pathological conditions in rural regions to warrant serious attention.

Pauperism.— There is much pauperism in rural regions where it would not be expected, and, certainly, more than is legitimate. Where the "outdoor" method of administering relief is practised this is likely to be the case. In the hands of men, generally county commissioners, ignorant of the conditions which breed paupers and of the significance of the fact of pauperism; without knowledge of adequate and preventive means of giving assistance; this method could not be expected to result otherwise than in building up a permanent class of dependents.

In some cases also commissioners are known to use relief work as a means of obtaining the political support of a certain element in their county or township. Again, it is found that, in some states, their fees are determined by the day and the temptation is strong to increase them by making a relief order stand for a day's work. Thus, in North Dakota, some commissioners formerly wrote such an order and charged the county five dollars for a day's work. This system encourages commissioners to sustain a horde of dependents and to oppose every effort which promises to reduce their number.

Very seldom is an applicant for relief investigated as to worthiness and extent of need. There is little or no visitation to see if the assistance is properly used or if it should be discontinued. An officer seldom regards it as his duty to give help so that it does not pauperise, or to attempt to reclaim the professional pauper to self-supporting citizenship. Our county system of administering relief is about as vicious as it could be because it encourages rather than discourages the condition it should seek to remove.

Much should be said about the indoor method of assisting the dependent. Probably most of the almshouses are conducted in a way to foster a dependent class. Almshouses should be retained for the permanent classes of impoverished persons. Others should be excluded. Admission and dismissal should be strictly guarded. The common practice is to send all classes of cases there, and to admit and dismiss individuals largely upon their own volition. Half-witted women use them as a lying-in place, depart at will, only to return again for the same purpose, thus adding to the population both a dependent and defective element. Young children are housed among professional paupers and others of vicious or undesirable habits and by the process of imitation come to be contaminated. It is almost inevitable that they should recruit either the dependent or the delinquent class.

Unwise philanthropy assists the enlargement of the rural dependent class. Feeding tramps is a standing practice in most of our farm regions. This amounts to breeding tramps, for it is an inducement to shiftless individuals to secure an easy living. In the West there has been developed a new species of tramp.

"They live in a covered wagon and with a broken-down team of horses they travel from town to town and from place to place, camping in the woodside, begging bread for the family and corn and fodder for the horses." These migrants are not criminals but they do not hesitate to appropriate the

things they need. Investigation of a large number of cases showed that the majority of the women were immoral.

Vice.— Crime, as we discovered, is less prolific in rural than in urban districts. Yet the former possesses a sufficient amount to demand earnest attention. We have noted that tramps are found throughout the country. Many of them are criminal in tendency and in practice. The floating labour class which abounds at certain seasons of the year contributes its quota to the establishment of vicious example. These two classes furnish many of the cases of theft, assault, and rape which occur. Much less vice exists in the open country than in villages and small cities. Prostitution hardly occurs.

The small towns in many cases are infested with vicious habits and rowdyism. Insufficient police force is partly responsible for this condition. Boys are allowed to grow up with idle habits and a freedom of life entirely unsuppressed. They develop a spirit of resistance to the laws and consequently a sort of imbecile rowdyism which leads to viciousness and finally to crime. This shows itself in petty crimes and misdemeanours. The "bad boy" has unusually large opportunities in the direction of infecting other boys and in organising mischief in these small places.

One of the semi-pathological conditions which quite generally exists in country regions is salacious conversation. The talk which takes place about the threshing machine during idle periods illustrates this. The most disreputable stories are about the only kind narrated. Allusions to the most private affairs of the sexes are frequent and the chief enjoyment is gained from the coarse humour of such butts and stories.

The noted Jukes family is an example of the combination of vice and dependency which may be allowed to develop in neglected rural communities. The original Jukes were rural New Yorkers, as were many of the descendants. But

of a total lineage of 1,200 persons 709 were investigated by Mr. Dugdale. Of these 540 were of Jukes blood and 169 connected by marriage. Of the 305 blooded Jukes who reached marriageable age, 82 were illegitimate, 73 prostitutes, 12 kept brothels, 51 were syphilitic, 49 were criminals, 95 received outdoor and 53 almshouse relief. Of the 169 who married Jukes, 9 were illegitimate, 55 prostitutes, 6 kept brothels, 16 were syphilitics, 27 were criminals, 47 received outdoor and 11 almshouse relief. This takes no account of the 58 of the first class and 23 of the second class who were unascertained. Fifty-two and four-tenths per cent. of the Jukes women were harlots. The investigator estimated that in 75 years they cost the community $1,250,000, besides the evil inheritances it imposed on posterity. This family is only an extreme case of a type of family which many country and village communities are breeding. Loose methods of relief, a lax or absent police power, and backward methods of treating youthful offenders are among the conditions which build up and perpetuate these stocks.

A family which promises to become even more famous than the Jukes is the Kallikak Family. This family stock has been investigated by the assistants of Dr. H. H. Goddard, director of the research laboratory of the Training School at Vineland, New Jersey, for the feeble-minded girls and boys, and the results have been made public by Dr. Goddard in a book, "The Kallikak Family."

The parents of this stock were a Revolutionary soldier and a feeble-minded girl, or rather their illegitimate son, Martin Kallikak, Jr. From Martin Kallikak, Jr., have come 480 descendants, of whom 143 were feeble-minded, 46 were normal, and the remainder are undetermined for lack of evidence. Among the 480 descendants, 36 were illegitimate, 33 sexually immoral, mostly prostitutes, 24 confirmed alcoholics, 3 epileptics, 3 criminals, 8 kept houses of ill-fame, 82 died in infancy.

These descendants married with people of about the same type, making a group of 1,146 recorded and charted persons. Two hundred and sixty-two members of this larger group were feeble-minded, 197 were considered normal, and the remainder were undetermined. The latter were frequently not what would be called good members of society.

The members of the Kallikak family lived in rural regions for most part. What the record of crime, vice, and pauperism would have been had they been residents of cities can only be imagined. But in the morally superior conditions of the country the record is startling and reveals the danger which is the result of inadequate laws and methods of treatment of a hereditarily and socially contaminated stock.

Country districts are subject to criminal exploitation of men from the cities. Says Professor Henderson: "The criminals of the city go out to plunder rural banks and stores. The common interest does not stop at city lines. The common enemy must be caught where he can be overtaken. The recent extension of trolley lines into the country and the introduction of swift automobiles have widened the field for professional burglars of cities. Against these trained villains the thin safes of country merchants and banks are mere tissue paper." Attention is also called to the inefficiency of the rural constable and county sheriff when pitted against the shrewd cunning and audacious daring of city-bred criminals.[1]

Rural communities are backward in the maintenance of suitable jails and lockups. The kind which obtain are more often preparatory schools of crime than correctives. Not only are the sanitary conditions vile and unwholesome but the practice of throwing young offenders into prison to concourse with mature criminals can result in nothing but breeding criminal careers. The sentencing of boys to prisons and remanding them to jails to await trial are practices which augment crime instead of being checks and preventives.

[1] "The Annals of the American Academy of Political and Social Science," Vol. XL, p. 231.

H. THE IMPROVEMENT OF RURAL CHARITABLE AND CORRECTIVE INSTITUTIONS

The usual relief agencies consist of outdoor relief and relief in almshouses.

Outdoor Relief.— Of giving aid to the poor outside of institutions we call "poorhouses" much is to be said in its favour. It is quite generally conceded to be the best plan to follow in those cases of poverty which promise to be temporary; also in counties where the number of permanent dependents is small. The reasons for this position may be briefly stated. First, it enables members of the family to share in self-support, and in case of a single individual may lead him to earlier and partial self-support. Second, it keeps the family together, one of the greatest objects in the administration of charity. Third, it avoids attaching to the individual the stigma of having been in the "poorhouse." Fourth, since a large share of poverty comes in the winter and is temporary in nature the outdoor method saves the investment of dead capital in costly institutions. Fifth, as a supporting reason may be mentioned the fact that the tendency of modern charity is in the direction of outdoor relief.

In case outdoor relief is resorted to, however, there are some necessary precautions which must be taken to make it safe and economical. First, every case should be carefully investigated by a competent person to make it certain that it is one of real need. Otherwise persons are likely to be imbued with a spirit of dependency, and a needless expenditure of public money is made. The first point is the more important. It is easier to pauperise individuals than it is to restore them to independence. No risks should be taken.

Second, great care should be exercised to see that assistance is not prolonged beyond the point of actual need. To unnecessarily prolong assistance is to pauperise. Frequent visitation is therefore essential. Third, careful guardianship

is needed to see that political capital is not made out of aid extended and that votes are not being purchased thereby. Fourth, the aid extended should usually be in the shape of the things actually needed rather than in the shape of money, as the latter may easily be squandered, or used to purchase alcohol. With these and other precautions outdoor relief should be made effective.

Indoor Relief.— The following statements may be made relative to relief in almshouses. As in outdoor relief the inmates are to be cared for so as to be restored to actual competency if possible and as soon as possible. Many of the requisites depend on the plan of the structure or buildings.

First, buildings should be constructed so as to permit of a separation of the sexes in order to prevent immorality, illegitimacy, etc. Second, they should be built to permit the separation of children from the adults. Children drink in the lives of the elders they grow up among. If kept in almshouses they should be carefully guarded from the degenerating influences of confirmed paupers, and should be educated carefully. Third, there should be provision made for the isolation of tubercular and other infectious cases, for the danger of inoculation is well known. Fourth, the insane and feeble-minded should never be kept in almshouses, but if they are they should have separate wards provided for them.

Fifth, all able-bodied persons should be given work. Work is the salvation of many dependents and defectives.

Some of the good effects of work are as follows: It aids health, good order and morals; reduces chronic grumbling by taking the mind off the self and creating a feeling of usefulness and dignity; prevents lapsing into a state of dementia, for just as in insane hospitals idleness is found to keep the inmates insane, so in hospitals for the poor it drives them insane; discourages lazy loafers and keeps them out of the almshouses. Work is the best sifting test known. In the Sauk County, Wisconsin, almshouse work revolutionised

the inmates, made them contented, restored many of them. Basket making, chair making, etc., are possible forms of work which might be provided. It is not easy to get the inmates to work but it ought to be attempted as a restorative. Sixth, frequent visitation of the institution should be established. Once a year is insufficient. Good authorities say once a month is none too often. Efficiency depends on visitation by intelligent and interested persons.

Needed Legislation.— Some consideration may well be given to needed improvements in the system of poor relief through advance in legislation. All that may be done is to enumerate and appraise the several points briefly. First, where it does not exist, a law should be passed for the establishment of a state board of charities. The board should be separate and special from all other boards.[4] It has special functions, needs special talent. Its work should be one of intelligent supervision of all institutions in the state devoted to the care of dependents, defectives, and delinquents; and there should be rigid inspection by means of a secretary or an inspector who would visit all institutions one or more times annually. It would also secure a service which is much needed, that of arousing an intelligent public opinion on the matter of relief along proper lines. The inspection would secure the right kind of buildings, raise the standard of superintendency, and make the administration of the institutions more effective.

Second, there should be laws entailing strict admission and discharge. As was remarked, one may almost pass into almshouses and out at will. Feebleminded women may make of them a convenience. Debauchees get admitted to rest up, then are away at will. It is a matter of public concern and should be closely regulated.

Third, building laws are needed which would require a

[4] This statement is open to discussion. Recently the tendency has been toward a single board of control.

separation of sexes, special classes of insane and diseased, and that of the children from adults. In the case of small populations several counties would better build jointly to secure these ends. Laws now commonly legalise this procedure.

Fourth, there should be laws which place superintendents and attendants on a civil-service basis, and require a certain standard of fitness and of preparation for the position of superintendent. Had we the institutions of the larger joint-county type these requirements could well be sustained. The best plan is the most economical in the long run and these steps should be taken. They have the approval of the experts and authorities on matters of relief work in the United States and European countries.

Fifth, a law establishing a central accounting system for the state on all charitable and criminal matters is greatly needed. In most of the states it is impossible to discover the amount expended for poor relief and for criminal matters, or the number of persons supported at public expense without resorting to the expense and trouble of visiting every county office and in some states every township office in the state. Such information is necessary if matters are to be improved. If a central accounting system were put into effect it would have a deterring influence on lax administration of public funds. In the matter of poor relief the number of persons aided and the amount of relief should be reported, as well as, perhaps, other facts.

Sixth, a Board of County Charities should be established by law, as is done in Indiana. In that state such a board is made mandatory on the petition of fifteen reputable citizens. The duty of such boards is to visit poor asylums, jails, orphans' homes, lockup, and any other charitable or correctional institution receiving any public support. They report to the Board of County Commissioners quarterly and to the Circuit Judge annually, reports being furnished to the

as of violent inebriates, is likely to result in harm in developing the trouble.

(2) The subject of acute mania should have advantage of a temporary test because of the stigma which attaches to having been an inmate of an "asylum." Besides, the aversion to this mode of treatment on the part of the subject and friends prevents that early treatment which might check the development of the attack.

(3) The effects of a demented person on the people in the vicinity, especially the children, is bad and should be removed as soon as possible. The reverse is also true, for the insane person is necessarily subject to many deteriorating influences in the home.

(4) It is estimated that the average cost of a permanent insane subject in Illinois is about $6,000, a sum to be escaped if possible. Let us suppose that each patient treated in a detention hospital should cost $1,000. In recovering ten people the state and community would save an item of $50,000.

(5) To give a chance for training to coming, and practising physicians in the detection and treatment of psychical disturbances and diseases may be an object. This is, of course, a somewhat incidental consideration, but when we remember that few physicians have had any training in the psychology of mental disorders and that the community is dependent on their knowledge in such cases, their equipment becomes a matter of great importance.

Says Dr. Frederick Peterson, "We have emergency hospitals for broken bones or acute fevers; but when the most important organ of the body, the brain, becomes affected with an acute disease, the emergency hospital is the jail. This deplorable condition of affairs has led to a steadily increasing agitation of the subject of emergency hospitals for the insane. It is an axiom among physicians versed in psychiatry that early diagnosis and speedy treatment are of para-

mount importance in nearly all cases of acute insanity. Surely, nothing could be worse for a delirious mind than the sight of police officials and prison walls. I advocate, therefore, the establishment in all large towns and cities of emergency pavilions or independent hospitals for the reception of the insane. Two small wards in a general hospital, or a pavilion in connection therewith, will suffice," in large towns.

Jails and Lockups.— The work of correction in rural communities is carried on by justice, county, and district courts, and by jails and lockups, reformatories and prisons. We are more concerned with the institutions which are located close to the country itself. Without describing the methods and processes in common use let us consider some of the things which should be done to make the work of correction effective and socially safe.

There are a number of needed improvements relative to jails and lockups. First, they should be maintained as places of detention for persons awaiting trial rather than for purposes of punishment. They are not fitted for the latter because they have not facilities for giving work and training of a curative nature. Idleness is demoralising. Second, they should not be used as places for the detention of witnesses since this mixes the innocent and criminal in a contaminating manner and places a stigma on the witness. Third, these detention places should be built to permit the entire separation of prisoners from each other and of the sexes. Very few local institutions admit of these necessary precautions against the contamination of the beginners by the hardened criminals, and of the humiliation of womanhood. Fourth, we have given the reasons for excluding the insane from imprisonment. Fifth, youthful offenders should never be placed in the position of being regarded as criminals nor should they be thrust in with grown men, perhaps of the professional criminal type. The one crushes the sense of innocence and freedom, the other is a schooling in

vicious and criminal practices. Sixth, some agency of a competent nature should be established for supervision and construction of local jails. Our common jails are a disgrace to civilisation in nearly all particulars. They should be improved by adequate court or state supervision. Since many inmates are later sent to state institutions under state laws it is evident that the state has authority in the premises. Supervision by a state agency obtains in Indiana, Pennsylvania, New York, Minnesota, Ohio, Michigan, Wisconsin, Virginia, California, and Connecticut. In Indiana a county board, whose members serve without pay, coöperate with the state board of charities. In that state the state board may condemn a jail, and has secured laws excluding juvenile delinquents, providing a police matron and better separation of the sexes.

The Probation System Needs to be Extended to Rural Regions.— The New York State Probation Commission regards the "extension of the probation system in the rural section of the state, through county probation officers, as very important. The social conditions, the non-enforcement of law and the absence of preventive agencies in many of the smaller communities, call urgently for probationary methods." The report of the Commission for 1909 says: "Much of the shiftlessness, lawlessness, truancy, vice, and crime in rural places goes uncorrected. Before anything effective is done to check the wayward tendencies in children and the rowdyism in young men, the evils often become so grave as to be beyond remedy. Some of the worst criminals and the most degenerate families in the state have grown up in small communities. In the absence of probation, practically the only course available is commitment to jail, and this rarely does good, and in many cases does harm." [7]

In case county probation officers cannot be obtained or until they are provided, voluntary associations with special

[7] *Survey*, May 21, 1910, pp. 304–5.

appointees to act as such should be organised. Justice courts are not proper tribunals for handling juvenile cases because the officers have no training and insight for such duties. A specially selected man who is in full sympathy with children and who has full knowledge of the methods of juvenile courts and probational processes is the only one competent to prevent youth from becoming professional delinquents.

County Welfare Agencies.— It is possible that county forces might sustain a "Charity Organisation." The federated forces of cities coöperate to prevent duplication of work, confusion in relief, wasteful methods of administration, and the building up rather than the curtailment of a dependent population. Should representatives of the schools, churches, poor officials and the various occupations of rural districts get together they could maintain a county associated charities. A council or board of directors with full power to act should be chosen. This would provide the supporting and directing power to the undertaking. An executive committee of the active and wide-awake representatives would work out lines of action and see that they were followed. A finance committee, a survey committee for making a survey of existing conditions, a medical committee and a visitation or friendly visitors' committee, are some of the useful committees.

The function which such a county organisation could perform are many. The more prominent and fundamental ones are coöperation with indoor and outdoor relief; the protection of children from life in an almshouse; discovering and securing the transmission of defective persons, such as the feeble-minded, the deaf, and the blind, to appropriate institutions; suppression of vagrancy by securing the general application of the work test or the passage of colony laws; initiating and conducting work that would help to prevent the production of dependency; and coöperation with city charity organisations.

A yearly meeting of the united forces would be stimulative. Other county organisations have such gatherings, the county Sunday School Association especially. With reports of work accomplished, discussion of conditions and methods of improvement, speeches and papers, the session could be made educative and promotive of the larger good.

Recent reform movements have given birth to the Board of Public Welfare of cities, and the Public Welfare League of Kansas. A suggestion has been made that counties organise a county Board of Public Welfare which should be the legalised agency for conducting the affairs of charity, delinquency, health, employment, etc.[8]

[8] "A Plan for Co-ordinating State Public Welfare Work," L. A. Halbet, *Survey*, 28; 660–661.

REFERENCES

Henderson, C. R. "Modern Methods of Charity," on treatment of vagrants in Australia, pp. 310–311; "Dependents, Defectives and Delinquents," Part II and Part IV; and *The Annals of the American Academy of Political and Social Science*, March, 1912, p. 228, "Rural Police."

"A Plan for Coördinating State Public Welfare Work." L. A. Halbet, *Survey*, 28: 660–661.

Parsons, Frank. "The Story of New Zealand," Chap. 51; and "Politics in New Zealand," Chap. 26.

Blackmar, F. W. "Social Degeneration in Towns and Rural Districts," "National Conference Charities and Correction," 1900, pp. 115–124.

Dugdale. "The Jukes."

Peterson, Frederick, M.D., Pres. of the New York State Commission of Lunacy. "The Essentials of an Adequate System of Care for the Insane," "National Conference of Charities and Correction," 1902, pp. 166–8.

Bonett. "Hospitals for the Acute and Recoverable Insane," same, 1907, p. 397 ff.

"Why Should Any One go Insane?" Folks & Elwood. State Charities Aid Association, New York City.

"Programme to Prevent Increase of Insanity." *Survey*, January 7, 1911, pp. 523–4.

Brown, D. C. "State Supervision of County and Municipal Prisons and Homes for the Poor." "National Conference of Charities and Corrections," 1910, pp. 303–7.

The Survey, May 21, 1910, pp. 304–5.

Indiana Bulletin of Charities and Correction, March, 1906, p. 71 ff.; and "The Development of Public Charities in Indiana," Indianapolis, 1905.

"The Kallikak Family." H. H. Goddard.

CHAPTER XX

RURAL SOCIAL SURVEYS

I. IMPORTANCE OF THE SURVEY

Value in City Life.— A work on rural life would be incomplete should it fail to develop the thought of the social survey in its application to rural communities. The survey concept is comparatively new, although in a certain sense all censuses from those of ancient Semitic nations and the Domesday Book of William the First of England down to modern national and state censuses are approaches to making surveys. Scientific methods require time to grow and become perfected and the social survey as an objective method of obtaining facts relative to community life has developed and must still be subjected to criticism, experience, and improvement before it may be called a perfected scientific method of the social sciences.

In recent times the survey ideal has taken root in the city. It has sprung out of a practical attempt to obtain information about urban conditions so that certain abuses might be removed and social problems solved. Perhaps Charles Booth's investigations in London during seventeen years, the results of which appeared in his "Life and Labour of the People of London," may be called the beginning of the modern survey. Similar investigations, though not so extensive, have been conducted by various individuals in American cities.

In cities life is so complicated, conditions are so numerous and enmeshed, that it is impossible for the mere individual to prosecute the work of a survey which shall be general with

fulness and precision. As a consequence organised efforts have undertaken the work and we have the "Pittsburg survey," and the "Buffalo survey," as their noted examples. Other cities are making inventories of city conditions with a view to projecting plans for the direction of their future development.

The value of the survey is obvious. Before beginning to construct its line of railway a railway corporation sends out its corps of engineers who obtain a knowledge of the character of the territory through which it is proposed to construct the line relative to advantages and disadvantages of projection and construction. Besides this other experts have gathered data as to the resources of the region in order to demonstrate a certain basis for profitable traffic after the road has been built. No material fact is left out of account which throws light on the nature of the undertaking. Hundreds of millions of dollars will be required to develop the project and absolute accuracy and certainty is demanded to warrant this expenditure.

The city is a permanent collective entity. It is to be the home of human beings far into the future. Human welfare is at stake. Complicated conditions bring abuses and problems. Remedies and solutions must be founded on accurately ascertained facts. To gather the facts about all phases of city life and to plat and map the conditions as they exist for the direction of present and future efforts at betterment is as important and necessary in the case of the city as in that of the railway.

The practical benefits of the urban survey have appeared. Pittsburg has undertaken the regeneration of its civic life as a consequence of its survey. Other cities have been awakened to the consciousness of their untoward conditions because of the revelations in Pittsburg and are moving to take action. The Buffalo survey involved only the conditions of the 70,000 or 80,000 Poles who live in that city, a popula-

tion not known by the municipality nor understood by itself. Since the survey, "in place of general ignorance and either indifference or vague talk of a 'problem,' have been substituted an accurate knowledge of the conditions of the Poles; and aroused interest, on the part of the general local public and of the Poles themselves, in those conditions; the beginnings of a movement of coöperation, for betterment and mutual advantage, between the Poles and the rest of the community; and withal, a clearly defined question of social economy." [1]

Additional value attaches to the survey from the fact that it furnishes an accurate objective scientific method which the social sciences may use to their advantage.

Value in Rural Life.— Several reasons exist why the survey idea took root in cities first. The social problems arose there earliest to demand consideration. It became necessary to chart the conditions, consequently, in order to solve the problems satisfactorily. Again the community idea is more perceptible in the city. The city is a definitely bounded and compacted aggregation. Therefore the suggestion is likely to occur there before it arises in the country that all the facts and conditions relative to this clearly defined object may be obtained. Where the community idea is clouded and the boundaries between communities are not conspicuously visible, as is the case in the country, the undertaking to secure a neighbourhood reconnaissance appears vague. Until the prism separated the rays of sunlight into distinct groups it was not thought possible to chart the spectrum. Now the twenty-one colours of the normal spectrum with their boundary lines may be designated. Rural life surveys have had to await the development of the analysis of country life conditions and the defining of rural communities as such. We now know enough about rural communities to undertake the application of the survey to them.

[1] "National Conference of Charities and Correction," 1910, p. 238.

The value of the rural survey rests on the reply to the questions, Does the country need to know anything about itself? Has the rural community any pressing problems? If this volume is true these questions must be answered in the affirmative. We have discovered many problems in country life. Some of these problems are those of local communities and must be solved largely by developing an appreciation on the part of the inhabitants of those communities of the conditions lying beneath those problems. Some of the rural problems are inter-community matters and await the development of intercommunity coöperation. The first set of problems because of their localised nature may appropriately be subjected to the rural social survey. If a survey of the conditions which underlie the second group of problems is to be undertaken it must be on a very large scale, calling for the effort of state or nation.

Since the country has its problems and since their solution awaits the discovery of the exact terms entering into the problem the inference is forced upon us that a rural survey which discovered the conditions of any of its problems would be of great value. As a matter of fact the survey has been applied to certain rural matters. In order to discover how to secure the best returns from the soil both national and state agricultural experts have been making surveys to determine the location of the different kinds of soils. A counterpart of this is to discover what plants will thrive best on each of these soils. These terms being found the problem has found its solution. What now remains to be done to make the application of the survey to the country complete is to follow this same procedure relative to matters of education, of labour, of church, of recreation, culture, associational matters, and so on, until the whole is covered. It is in line with all similar scientific undertakings to conclude that the compensation to rural community welfare resulting from the survey will be rich beyond peradventure.

Relative Ease of Making a Rural Survey.— As compared with the work of making an urban survey that of a rural community is simple and easy. To make a complete community survey would be to discover and record all the essential facts which bear in any way upon the welfare of the community. In our chapter on the distinction between the urban and rural community it was discovered that while the city is a very distinctly localised and bounded object of investigation it is also a medley of associational relations. It is therefore exceedingly difficult to gather together all the facts relative to urban life and to so rationally relate and organise them that they will give an unbiased and accurate account of the community in its entirety. In fact a full-orbed, exhaustive urban survey has never yet been undertaken. Every survey which has yet been made has been partial. Certain individual surveys have been somewhat exhaustive in their plan but incomplete in their facts.[2] Surveys undertaken by organisations or cities have devoted themselves to the investigation of certain aspects of city life.

When we turn to rural communities we find them simple in constitution although their exact perimeters are not easily designated. The latter difficulty is, however, slight as compared with that arising from the constitutional complexity of the city. It would not be difficult for the trained investigator to gather and chart the essential conditions of a given rural neighbourhood. The live pastor and the virile educator should each be able to accomplish this for the adaptation and direction of their respective sociological functions.

II. NATURE OF THE SURVEY

Kinds of Surveys.— Surveys may be partial and general. They may also be scientific or practical. These two groups

[2] Such for instance as T. J. Riley's "The Higher Life of Chicago," and the earlier "Culture Agencies of a Typical Manufacturing Group — South Chicago," by the present writer.

of surveys are not exclusive of each other. Both a partial and general survey may at the same time be either scientific or practical. Clearness requires a brief characterisation of each.

1. The partial survey consists in the investigation, collection, and rationalisation of the facts relative to any particular section of community life. The labour factor of a neighbourhood might be studied. The study would embrace the number, character, and quality of the labourers, wages, conditions of living, relation of workers in various relationships to other residents of the community, defects of the labour system for the labourers and for the community, etc. The educator might investigate all the conditions bearing on education in his school district, or study some particular phase of the educational situation. The latter study might consider the play conditions of the district. This would embrace such considerations, as the number, ages, and sex of the children, facilities for play in the homes, neighbourhood, and school, nature of their play whether individual or organised, possibility and advantages of organised play in school, or elsewhere, including cost of equipment and direction. The philosophy of the function of play in the life of the individual and society would constitute a background for the direction of the investigation and the conclusions drawn from it.

2. The general survey would attempt to obtain an exact knowledge of all the essential facts of the community. It seeks to know the community in its entirety and the conditions of the community in their interrelationships and interdependencies. Whatever the purpose of the survey may be it is certain that the more complete and accurate the collection of facts can be made the truer to life and reality will the conclusions be. In this survey hardly any condition, whether individual or collective in its appearance, is too insignificant to be regarded. The musical tastes of a domestic

or the inventive tendencies of a farmer's boy may have a significance for the life of rural communities.

3. In their purpose surveys may be practical or scientific. A survey is practical when it has for its immediate aim the improvement of some particular phase of neighbourhood life or of the general life of the community. Most of the surveys so far have been immediately utilitarian in their aim.

A survey is scientific when it is made to serve merely scientific uses immediately. A student of society might investigate the conditions of city or country in order to understand the nature of such communities. If taught to or published for others this would enlarge the scientific knowledge of such communities. This, however, would not prevent it from being useful ultimately. It may be said that rural sociology stands quite as much in need of such studies as rural welfare demands practical surveys on the part of well equipped workers.

What a Sociological Survey Should Contain.— 1. The nature of the contents will measurably depend on the purpose of the survey. (a) The partial survey will contain such considerations as are pertinent to its inquiry. Thus a church survey will gather all facts which bear on church life at the least. No doubt the contents actually gathered will depend on the training and outlook of the investigator. Economic conditions might be studied from either or both of two view-points: as a basis of the material resources of the church, or with a view to considering economic conditions as a basis of social welfare. In the same manner the birth-rate of the community might be studied as affecting the future membership of the church, or as reflecting the ethical views of residents relative to family matters. Thus the view-point of the investigator will broaden or narrow the scope of the investigation. Scarcely any fact exists which might not be of value to the conducting of a church for social welfare purposes. If its aim is merely doctrinal and individualistic, on the other

hand, a survey is hardly necessary, save for reasons of expediency. But if its aim is broadly social it must understand the community sociologically, that is in its entirety.

What has been said about the church survey holds true of those which might be made by educators, doctors, farmers, etc. Each of these persons may take the individualistic view of his calling. In this case a survey would be difficult to justify. But if he views himself or his work as having a social function, and if he has in mind the social welfare, his survey must embrace practically every fact in order that he and his function may find their right social relationship. Then the conclusions drawn from the survey will relate to the adaptation of his calling to advance the good of the community rather than to the community welfare in general. Thus the preacher will draw conclusions relative to making his church the best possible social service church under the given conditions; and no doubt also how to make it better the conditions.

(b) The general survey must tabulate all contents of whatever character because the aim of the survey is as broad as the whole of the community in question. This survey would be undertaken to afford a prospectus of community conditions which would be competent to serve either general or special purposes. It should help the control and direction of community conditions in general. It should be available for the control and direction of any division of labour, institution, or group of individuals. It should shed light on how to uplift and improve the community as a community. It should prompt a conclusion as to what the church, the school, the home, or any other institution or division of labour should be and undertake. It is assumed that the investigator possesses a knowledge of other community conditions which will serve to regulate conclusions relative to the region surveyed.

2. A somewhat approximate scheme for the direction of rural surveys may be suggested but must not be regarded as

final. The schedules and tabulations under each of them are intended to suggest and to comprehend the important facts to be gathered.

Schedule A, Physical conditions.
- Altitude.
- Topography.
- Precipitation of moisture.
- Average and extremes of temperature by seasons.
- Prevailing winds, velocity.
- Length and character of seasons.
- Kinds of soil.
- Forests.
- Mineral resources.
- Streams and lakes.

Schedule B, Elements of population.
- Number of inhabitants by age and sex.
- Number and size of families.
- Widows, widowers, orphans.
- Nationalities: number, age, sex.
- Education and Americanising quality of immigrants.
- Tendencies in population towards transiency and racial displacement; increase or decrease.

Schedule C, Economic factors.
- Number and size of farms.
- Conditions of agriculture.
  - Methods of farming.
  - Acreage and yield of crops.
  - Amount and quality of stock and poultry.
  - Buildings, machinery, and equipment.
- Marketing.
  - Proximity of markets.
  - Profit of farmer from marketing.
  - Organisations to improve prices and marketing.
- Number and characteristics of renters.
- Labourers and labour conditions.
  - Wages, hours.
  - Conditions of living.
- Comparative rate of taxes, interest.
- Mortgages.

Schedule D, Political conditions.
- Character of local government.

Quality of officers.
Political ideas and parties.
Voting population.

Schedule E, Religious conditions.
Number and strength of denominations.
Number of churches, size of membership, congregations.
Character of pastors: education, view-point.
Individualistic or socialised character of church work.
Equipment of plants for community work.
Auxiliary societies.

Schedule F, Cultural conditions.
Schools.
Number.
School attendance by age and sex.
Teachers by age and sex.
Equipment of buildings as to light, heat, sanitation, desks, blackboards, charts, reference works, laboratories, toilet, water, athletics, organised play, domestic science, agriculture, industrial, and manual training, playgrounds.
Character of course of study.
Culture clubs for men, women, and children.
Public libraries: equipment, patronage.
Newspapers and periodicals: circulation and character.
Institutes, chautauquas, lectures.

Schedule G, Community psychology.
Public opinion: strong or weak; united or divisive; emotional or rational.
Ideals: high or low, socialised or individualistic.
Capacity to lead and respond to leadership.
Race or class prejudice; feuds; cliques.

Schedule H, Transportation and communication.
Location and condition of roads.
Method of transit; wagon, carriage, horseback, automobile, trolley.
Use of telephone, rural delivery, etc.
Organisations for improvement.

Schedule I, Esthetic conditions.
Appearance of landscape: improved or unimproved, marred, or regarded.
Appearance of homes, barns, outbuildings, fences, forestry, and fields.
Appearance of interior of homes.

Schedule J, Recreation.
- Recreation clubs.
- Games and sports.
- Entertainments.
- Places and equipment for such activities.

Schedule K, Health conditions.
- Conditions about barns, homes and other structures.
- Methods of disposal of slops, sewage, garbage, and manures.
- Undrained swamps.
- Character of water supply.
- Heating, lighting, and sanitation of public buildings: churches, schools, halls, etc.
- Diseased animals.
- Housekeeping: preparation and care of foods, milk, vegetables.
- Care of infectious diseases.
- Treatment of sick or defective school children.

Schedule L, Pathological conditions.
- Degenerate classes and influences.
- Number, age, sex of dependents.
- Number, age, sex of criminals.
- Number, age, sex of defectives.
  - Idiots, feeble-minded, insane, epileptics.
- Character of institutions for care of defectives, dependents, and delinquents.
- Methods and quality of relief work.
- Methods and care of dependent children.
- Preventive and ameliorative agencies.

Additional interest and insight may be gained by the construction of accompanying maps and graphic representations. The chief features of statistical tabulations should be plotted on thick paper, cardboard, or even cloth for the purpose of public display. Comparative black lines and spaces are effective devices for attracting attention and presenting the truth in a short time.

The accompanying map of a rural Methodist parish presents some of the more important surface facts which may be represented on a map. It was made by the pastor of the parish, Mr. S. S. Wyand, a graduate student of the writer. The parish is located in an almost perfectly level region.

The coulées are slight depressions, dry during most of the time but furnishing a drainage in wet weather. The location of the homes gives an idea of their distance from each other. Reynolds, in which the church is located, is a rural village of about 500 inhabitants. The railway and the Meridian Road are the chief transportation features of the community, although fairly good roads exist on most section lines. Only enough families were located to indicate the frequency of homes. The size of farms is indicated at the right of the Great Northern Railway only.

REFERENCES

"The Social Survey: Its Reasons, Methods, and Results." John Daniels, "Conference of Charities and Correction," 1910: 236–40.

"Sociology and Social Surveys." T. J. Riley, *American Journal Sociology*, 16:818–33.

"The Application of the Social Survey to the Small Community." J. L. Gillen, "Publication of the American Sociological Society," Vol. VI: 70–81.

"The Small City and the Survey." *World To-day*, 21:828–32.

"The Survey Idea in Country Life Work." L. H. Bailey, *Rural Manhood*, October, 1911, p. 253 ff.

"The Pittsburg Survey." *Charities*, January 2, 1909: 515–638; February, 6: 784–950; March 6: 1035–1194.

"Community Study." Warren H. Wilson, Missionary Education Movement, New York, 1911.

"Knowing One's Own Community." Carol Aronovici.

"Social and Economic Survey of a Rural Township in Southern Minnesota." Carl W. Thompson and G. P. Warber.

"The Making of a Town," F. L. McVey, Chap. 1.

"Rural Life Survey," edited by W. H. Wilson, Board Home Missions, Presb. Ch., U. S. H., New York.

INDEX

A

Absentee landlordism, 218
  economic effects of, 223–225
Accidents among farm labourers, 232, 233
Accounting, farm, 156, 157
  in poor relief, 371
Acreage of farms in United States, 19, 211–215
Agee, A., on drainage, 146
Agricultural banks, in France, 185–187
Agricultural Central Loan Bank of Germany, 182–184
Agricultural colleges, 354–357
  extension work by, 359, 360
  road construction courses in, 197
Agricultural commodities, distribution of profits on, 166, 167
Agricultural communities, types of, 49–76. *See also* Rural communities
Agricultural co-operation. *See* Co-operation
Agricultural credit. *See* Rural credit
Agricultural demonstration work, 143, 144
Agricultural education, in agricultural colleges, 354–357
  in elementary schools, 348, 349
  in normal schools, 352–354
  in secondary schools, 351, 352, 358
  in universities, 350, 351
Agricultural experts, 161, 162
Agricultural extension work, 358–360
Agricultural high schools, 357, 358
Agricultural immigrants, 70–72
Agricultural lands, available in United States, 205
  unimproved, 206–209
Agricultural machinery, 256, 257, 266, 267
  accidents due to, 232, 233
  benefits due to, 149–152
  values consumed per acre for, 159, 160
Agricultural organisation. *See* Organisation
Agricultural production, improvement of, 135–153
  increase in, 142, 143
  organisation of factors of, 154–156
  relation of, to population, 140–142
  science applied to, 142–153
Agricultural regions, dominant, in the United States, 35–37
Agricultural trade schools, 357, 358
Agriculture, importance of, 4–6
  influence of economic conditions on, 34
  irrigation and, 59, 60
  physical conditions of the United States and, 22–47
  reorganisation of, 82
  response of, to physical conditions, 34–46
  scientific, 24, 25
  sociological implication of, 135–138
  See also Farms and Farming
Almshouses, 364, 369, 370
Altitude, distribution of population according to, 23
Amateur theatricals, 292
American Association for Highway Improvement, 199
American Society of Equity, 50, 170, 298, 299
Amusements. *See* Recreation
Animals and insects, disease transmission by, 243–245
Apple production in United States, 45
Arbour Day, 289, 290

Arid lands in United States, 33
34
reclamation of, 205
Art exhibits, travelling, 303
Artesian wells, 240
Associational life, desirability of, 276–283
distinction between urban and rural communities based on, 12–14
social solidarity and, 281–283
Austin, Charles B., on cotton raising in Texas, 52
Austria, rural credit in, 184
Automobile traction motor, 262

B

Backward communities, 73–76
Bacteria in milk, 247
Bailey, L. H., on decadence of the rural church, 317, 318
on farm abandonment, 96
on farm buildings, 259
on farmers' institutes, 359
on need of rural leaders, 338
on rural socialisation, 286
on social backwardness of country, 275
study by, of student opinion on farm life, 113
Ball, plans of, for neighbourhood clubhouse, 304, 305
Bank of France, 185–187
Banks, agricultural, in France, 185–187
landschaft, 182
Barley, 39, 40
Barley areas in United States, 40
Barns. *See* Buildings
Bathrooms, 263
Bavaria, rural credit in, 179
Bed-bugs, 245
Berries. *See* Small fruits
Bible, interpretation of, 313
Birds, protection of useful, 153
Birth rates, 87
Board, farm, average cost of, 158
Boll-weevil pest, 44, 148
Bookkeeping. *See* Accounting
Bookwalter, on distinction between urban and rural communities, 14, 15
Booth, Charles, city investigations of, 380
Bowman, on requirements of plant life, 31, 32
on wind currents in United States, 30
Boys' clubs, 290, 291
Brewer, on care of the home, 238, 239
on flies as disease carriers, 243
Brigham, on soils of New England, 33
Buffalo, social survey of, 381, 382
Buildings, farm, 258, 259
Business management of the farm, 107, 108, 154–162
Business side of farming, improvement of, 154–175
by rural credit, 176–190
Butterfield, Kenyon L., on rural pastors, 321
on rural socialisation, 283, 284
on undesirable traits of farming populations, 132

C

California, road construction in, 198, 199
California Fruit Growers' Exchange, 172, 173
Capitalistic ownership of farm lands, 214, 215
Carey law, 57
Carver, on distribution of profits on agricultural commodities, 166, 167
Cess-pools, 242, 243
Characteristics developed by farm life, 131–133
Charity and correction, rural, 363–379
improvement of, 368–378
needed legislation on, 370–372
Chemical closets, 243
Cherry production in United States, 46
Child labour on the farm, 281
Child raising, training in, 335, 336
Children, advantages for rearing, in country, 126, 127
clubs for, 290, 291
death rates for, in city and country, 115, 116
diseases of, 248, 250

Children—continued.
organised play for, 278–281
physical differences between rural and city, 280, 281
See also Schools
Church, functions of, 310–316
rural, decadence of, 316–320
improvement of, 310–326
as a social centre, 343
socialisation of, 321, 322
Church survey, 386, 387
Cisterns, 240
Cities, definition of, 10, 20
development of, 12
distribution of, 84
function of, 10, 11
growth of, 78, 79
industrial nature of, 83–85
permanency of, 83
significance and causes of, 94–100
sources of, 85–94
incorporation of, 88, 89
individual types developed in, 16, 17
mob spirit in, 17, 18
problems of, 15, 16
producing unit in, 19, 20
rural emigration to, 274
relative decline in food production due to, 141, 142
significance and causes of, 94–100
settlement of immigrants in, 69, 70
size and density of, 14, 15
social mediation in, 11, 12
See also Urban
Citrus fruits, production of, in United States, 46
Clergymen, rural, 313, 314, 319
social and economic training of, 320, 321
Climate, distribution of population according to, 23, 24
Clow, on sociological tendencies in normal schools, 353
Clubhouse, neighbourhood, plans for, 304–307
Clubs, rural improvement, 288–309
boys', 290, 291
farmers', 300, 301
girls', 291
women's, 292–295
young people's, 291, 292
Collective mind, 17, 18
Colleges. *See* Universities
agricultural, 354–357
extension work by, 359, 360
road construction courses in, 197
Collins, P. V., on lack of conveniences in rural homes, 257
Commercial clubs, farmers' clubs compared with, 300
good roads advocated by, 197
Commercial fertilisers, 145
Communication, improvement of, 191–203
rural socialisation and, 284, 285
social function of, 192–194
Communities, backward, 73–76
distinction between rural and urban, 9–21
corn raising, 50, 51
cotton raising, 51–53
farm village, 61–64
frontier or pioneer, 54–56
grain raising, 49, 50
influence of physical conditions on, 22, 23
irrigation, 56–64
limitations of physical environment in, 26, 27
mixed-agricultural, 53, 54
problems of, 15, 16
progress of, dependent on scientific methods, 24, 25
purely agricultural, 49–53
rural. *See* Rural communities
rural immigrant, 64–72
socialisation of, 273
types of, 48–76
Community centres. *See* Social centres
Community vigour and physical variation, 25, 26
Competition, demoralising effects of, 168
Concrete basements, 263
Consolidation of rural schools, 344–350
Contagion in city and country, 116
Co-operation in the cotton belt, 53
in Denmark, 171, 172
family, 127
in grain raising communities, 50

Co-operation—continued.
in irrigation communities, 60, 61
promotion of, by association, 277
religions, 322
in road improvement, 198
in sanitation, 249
taught by play, 279
value of, 168
Co-operative buying and selling associations, 232
Co-operative demonstration work, 143, 144
Co-operative marketing associations, 167–174
Co-operative rural credit associations. *See* Rural credit
Corn, 40
exportation of, 42
production of, in United States, 41, 42
Corn areas in United States, 40, 41
Corn belt of United States, 35, 40, 41
Corn raising community, 50, 51
Cornell University, questionnaire on farm life at, 112, 113
plans of, for rural community centre, 307
Correction and charity, rural, 363–379
improvement of, 368–378
needed legislation on, 370–372
Correspondence courses in agriculture, 358
Cost of living, 139, 140
Cotton, 42
picking of, 43
production of, in United States, 43
the South and, 44
Cotton areas in United States, 42, 43
Cotton belt of United States, 36
Cotton raising community, 51–53
Country, backwardness of, 273–276
characteristics developed in, 131, 132
contact with nature in, 119, 120
family life in, 126, 127
Country—continued.
migration from. *See* Rural migration
problems of, 6, 7, 15, 16
social evils in, 120–125
See also Farms and Rural
Country Life Commission, 102
on intemperance, 229
on labour supply, 225
Countryside landscapes, 269, 270
County boards of charities, 371, 372
County library system, 303
County welfare agencies, 377, 378
County Y. M. C. A., 323–325
Creamery business, improvements in, 152
Credit. *See* Rural credit
Credit Foncier, 187, 188
Crime in city and country, 121
in rural communities, 365–367
Crop mortgage system, 43, 44
Crops, loss of, due to insects, 149
rotation of, 145
in United States, 35–47
See also Agricultural production
Culture, influence of, in community, 26
promotion of, by association, 277

D

Dairying, 35
improvements in, 152
sanitary requirements of, 247, 248
Davenport, Dean, on agricultural instruction in high schools, 358
"Dead villages," 73
Death rates in country and city, 114–119
Deaths, causes of, in city and country, 118
Demonstration work, agricultural, 143, 144
Denmark, farm marketing in, 171, 172
tenant farming in, 222
Density of urban and rural communities, 14, 15
Department of Agriculture, enforcement of food and drug act by, 238

Department of Agriculture—continued.
investigation of marketing conditions by, 165
investigations of rural credit by, 176–178
Deserted farms, 73, 96. *See also* Rural migration
Dewey, on moral principles in education, 336, 337
on occupations, 13
Diseases, of plants and animals, 153
spread of, in city and country, 116
transmissible, 248, 249
in schools, 250–253
Distances of work places from workers in city and country, 18, 19
Divorce in city and country, 123, 124
Domestic science in rural schools, 334–336
Drainage, 146, 153
reclamation by, 205
Drinking cup, common, 251, 252
Dry farming, 153, 206
Dugdale, investigation of Jukes family by, 366

E

Economic advantages of farm life, 127, 128
Economic conditions in irrigation communities, 59, 60
in mixed-agricultural communities, 54
Economic disadvantages of farm life, 128, 129
Economic effects of absentee landlordism, 223–225
Economic features, influence of, on agriculture, 34
Economic problems of rural life, 107, 108
Economic status of farmer, 104, 105
Economic training of rural clergymen, 320, 321
Economic value of farm machinery, 149–151
Economics, rural, 3, 4
in rural schools, 337
Education, as agency of rural health improvement, 238
agricultural. *See* Agricultural education
in frontier communities, 56
for good roads, 197–199
rural, adjustment of, 327–362
sociological demands of, 327–330
special demands of, 333–344
See also Schools
Electric motors, 261, 262
Electricity, application of, to farm needs, 152
Engineer, highway, 202
England, farm tenancy in, 220
large land holdings in, 215
rural legislation in, 215
Enteritis, deaths from, 246
Environment, physical, influence of, 22–27
limitations of, 26, 27
types of communities due to, 48–76
"Estate accounting," 156, 157
Experts, agricultural, 161, 162
Exportation of corn, 42
of food stuffs, 138, 139
Extension work in agriculture, 358–360

F

Fairbanks, Arthur, on individual development, 16
Family life, advantages of country for, 126, 127
Farm colonies for tramps, 372
Farm labour bureaus, 230
Farm lands, unimproved, 206–209
value of, 104
Farm marketing, 162–167
in Denmark, 171, 172
Farm village communities, 61–64
Farmers, in governmental affairs, 106, 107
individualistic attitude of, 103
as managers. *See* Farms, management of
organisation of, benefits of, 167–174
requirements of, 169–171
See also Farmers' organisations

Farmers—continued.
as a social and economic class, 104–106
social status of, 105, 106
wealth of, 104
Farmers' clubs, 300, 301
Farmers' Co-operative Demonstration Work, 143, 144
Farmers' Equity Association. *See* American Society of Equity
Farmers' Grain Dealers' Associations, 173
Farmers' institutes, 197, 296, 298, 359, 360
Farmers' organisations, 295–301:
American Society of Equity, 298, 299
clubs, 300, 301
farmers' institutes, 296–298
farmers' union, 299, 300
grange, 295, 296
Farmers' Union, 299, 300
Farming, improvement of business side of, 154–175
by rural credit, 176–190
tenant, 215–225
improvement of, 223–225
See also Agriculture and Farms
Farms, abandonment of, 73, 96
See also Rural migration
accounting on, 156, 157
board on, average cost of, 158
buildings on, 258, 259
grounds of, improvement of, 268–270
improvement of utilities of, 260–268
income from, 155
labour on, for children, 281
hours of, 231, 232
rates of, 158
regulation of, 267, 268
seasonal demand for, 225, 226
shortage of, 95
social aspects of, 225–234
supply of, 225–228
labourers on, accidents among, 232, 233
life on, advantages of, 113–128
dependence of, on other activities, 103, 104
disadvantages of, 128–133
how to make more attractive, 256–270
student opinions of, 111–113
Farms—continued.
machinery on, 256, 257, 266, 267
accidents due to, 232, 233
benefits due to, 149–152
values consumed per acre for, 159, 160
management of, 154–162
operation of, 215–220
operators of, nativity of, 66, 67
ownership of, 68, 214, 215
size of, 19, 211–215
statistics of, 158–161
methods of collecting, 157, 160
tenancy of, 215–220
in United States, 19
Federation, church, 322
Feeble-minded, training of, 372, 373
Fertile lands of the United States, 32, 33
Fertilisers, 144–148
tests for, 146–148
Filters, 240, 241
Fisher, I., on nervous tension of modern life, 114
on state sanitary supervision, 237
Fleas, 245
Flies, 243, 244
Foder, on sewage contamination, 242
Folk-games, 286
Food and drug act, enforcement of, 238
Food production. *See* Agricultural production
Foods, care of, 264
choice and preparation of, 236, 237
exportation of, 138, 139
prices of, increase in, 139, 140
relation of, to health, 245–248
value of, improvement in, 137, 138
Forage crops, cost of production and feeding value of, 160
Foreign farmers, nationality of, 69
Foreign farm operators, 66, 67
Foreign farm owners, 68
Foreign population of United States, 64–66, 89, 90
France, farm ownership in, 220
rural credit in, 184–188
rural depopulation in, 79
Frontier communities, 54–56

Frosts in United States, 28, 29
Fruit production in United States, 44–46
Function of city and country, 10, 11

G

Games. *See* Play
Garbage disposal, 241, 242
Gas engines, 261
Germany, agricultural party of, 79
  farm ownership in, 220
  rural credit in, 181–184
Giddings, on excitability of rural populations, 18
Girls' clubs, 291
Goddard, H. H., investigation of Kallikak family by, 366
Good-roads associations, 198, 199
Graft in road administration, 201
Grain dealers' associations, 173
Grain raising community, 49, 50
Grange, 295, 296
Grape production in United States, 46
Grazing region of United States, 36, 37
Great Britain. *See* England
Grounds, farm, improvement of, 268–270

H

Harwood, on foods, 138
Hauling, cost of, 196
Hay, cost of growing, 161
  and forage in New England and Middle Atlantic States, 35
Health, farm life and, 113–119
  sanitation and rural, 235–255
  school and, 250–253
Heating plants, 262, 263
Henderson, on exploitation of country by city criminals, 367
Hessian fly, 148, 149
Hibbard, B. H., on mortgages, 179
High school work in consolidated schools, 347
High schools, agricultural, 357, 358
  agricultural education in, 351, 352
Higher education, rural conditions and, 350–360
Highway engineer, 202
Highways. *See* Roads
Hill, James J., on agriculture, 5
Historical factors in environment, 48
History and Historic Landmarks, committees on, 290
Hogs, disease and, 246
Home, care of, 238, 239
  improvement of, 262–266
  sanitation in. *See* Household sanitation
Horse labour, cost of, 159
  hours of, 158
Hot air engines, 261
Hours of labour on farm, 158
House-cleaning, 265 266
"House libraries," 303
Household economics, 265
  course in, for women's clubs, 293, 294
Household processes, improvement of, 262–266
Household sanitation, 238–249
Household work, reduction of, 237
Hughes, Charles E., on avoidable insanity, 373
Humidity in United States, 29

I

Illinois Grain Dealers' Association, 173
"Immigrant aliens," 90
Immigrant communities, rural, 64–72
Immigrants, agricultural, 70–72
  settlement of, in cities, 69, 70
Immigration, city growth and, 89–94
  relative decline in food production due to, 141
  in the United States, 64–72
Improved farm lands, 206–209
Improvement clubs, 288–309
Incipient insanity, 373–375
Incorporation of cities, 88, 89
Independence, possibility of, in farm life, 125
Individualism, 103, 104
Individuality, in urban and rural districts, 16, 17
Indoor relief, rural, 364, 369, 370
Industrial nature of city growth, 83–85

Industry, diversification of, 53, 54
Infectious diseases, 248, 249
Initiative, possibility of, in farm life, 125
Insanity in city and country, 121, 122
  provision for incipient, 373–375
Insect pests, 243–245
  loss to crops due to, 149
Institutes, farmers', 359, 360
  young people's, 297
Institutions, social. *See* Social institutions
Intellectual development, possibility of, in farm life, 125, 126
Intemperance, 229
Interest rates, rural, 177, 178
Interstate Commerce Commission, 163
Interstate rural migration, 93, 94
Invention, social evolution and, 135–137
Inventive power, application of, to nature, 24
Ireland, absentee landlordism in, 223, 224
  tenant farming in, 222
Irrigation, 153
  area subject to, in United States, 57, 58
  history of, 57
  methods of, 58
  statistics of, 57, 58
Irrigation communities, 56–64
Isolation of farm life, 131–133
Isotherms of United States, 27, 28
Italian immigrants, in agriculture, 71, 72

J

Jails, rural, 367, 375, 376
James, C. C., on work of Y. M. C. A., 325
Japanese labourers, 228
Jukes family, 365, 366

K

Kallikak family, 366, 367
Kephart, on mountain whites, 74, 75
Kern, on economic advantages of school consolidation, 349, 350
Killing frosts in United States, 28, 29
Kitchens, 264, 265
Knorr, G. W., on consolidated schools, 344, 345, 346, 347, 348, 350

L

Labour, farm, conditions of, 228–230
  remedies for, 230–232
  hours of, 158
  rates of, 158
  regulation of, 267, 268
  seasonal demand for, 225, 226
  shortage of, 95
  social aspects of, 225–234
  supply of, 225–228
Labourers, farm, accidents among, 232, 233
Land, available in United States, 204–206
  ownership of, 215–220
    significance of, 220–223
  social aspects of, 204–225
  tenure of, in United States, 215–220
  values of, effect of good roads on, 196
    effect of rural mail service on, 193, 194
  See also Farm lands
Land Credit Bank of France, 187, 188
Land-grant colleges, teacher training in, 352
Land Purchase Acts, 224
Landlordism. *See* Tenant farming
Landschaft system of rural credit, 181, 182
"Larger farming," 16
Latta, investigation of land values and roads by, 196
Laundries, 263, 264
Leadership, rural, dearth of, 106, 107, 287
  training for, 338–342, 347, 348
Legumes, enrichment of soil by, 147, 148
Libraries, 301–303
  "house," 303
  travelling, 303
Life insurance for farm labourers, 232

Lighting systems, 264
Lime content of soils, 34
Liquor question, 229
Literary clubs, 292
Literature, rural, 341
Live stock production, factors influencing, 38
in United States, 35–37
Loans. *See* Rural credit
Local improvement associations, 288–290
Lockups, 367, 375, 376

M

Machinery, farm, 256, 257, 266, 267
accidents due to, 232, 233
benefits due to, 149–152
values consumed per acre for, 159, 160
Mail service, rural, 192–194
Major crop response in United States, 37–46
Malaria, 244, 245
Mangold, G. B., on disease in city and country, 116
Manure, disposal of, 241, 242
Maps to accompany social surveys, 390, 391
Market gardening, 35
Marketing, 162–167
in Denmark, 171, 172
Marketing news, 170
Marriage in city and country, 123, 124
Maunier, René, city defined by, 20
McGee, W. J., on possible population of United States, 210
Measles, 248
Medical inspection in schools, 252, 253
Melancholia in country, 122
Mental deficiency, 248
Meridian Road, 192
Middle Atlantic States, agriculture in, 35
Middleman system, 164–167
Migration, rural, 274
city growth and, 89
interstate, 93, 94
relative decline in food production due to, 141, 142
significance and causes of, 94–100
Milk supply, relation of, to health, 246–248
Milking, sanitary precautions in, 247, 248
Mill, John Stuart, on land ownership, 220–222
Mixed-agricultural communities, 53, 54
Mixed farming in United States, 35
Mob-mindedness, 17, 18
Monopoly among middlemen, 165
Mormons, farm villages of, 61–64
Mortality. *See* Death rate
Mortgages, under Credit Foncier, 187, 188
under German Landschaft system, 181, 182
as a step toward farm ownership, 179
Mosquitoes, 244, 245
Motion pictures, 342, 343
Motor power on the farm, 260–262
household use of, 265
Mountain Whites, 74–76
Mountains, effect of, on rainfall and temperature, 30, 31

N

National Grange, 295, 296
Nativity, death rate and, 119
of farm operators, 66, 67
of farm owners, 68
Natural increase of population, 86–88
Nature, application of inventive power to, 24
contact with, in country life, 119, 120
moulding force of, 22–24
Negro labour in cotton belt, 51, 52
Negroes, death rates for, 119
Neighbourhood clubhouse, plans for, 304–307
Neighbourhood sanitation, 249–253
Nervous tension of modern life, 114
New England, agriculture in, 35
rural depopulation of, 81–83
soil in, 32, 33
New Zealand, agricultural registration law of, 170
prevention of vagrancy in, 372
Nitrogen content of soils, 34

Normal schools, agricultural education in, 352–354
North Dakota, University of, questionnaire on farm life at, 112, 113
Nut crop of United States, 46

O

Oats, cost of growing, 160, 161
Occupations, significance of, 13
Ocean, influence of, on temperature and rainfall, 30, 31
Old Home Week, 290
Orchard fruits, production of, in United States, 45
Organisation of factors of production, 154–156
of farmers, benefits of, 167–174
requirements of, 169–171
See also Farmers' organisations
Organised play, 278–281
Outdoor relief, rural, 120, 121, 363, 364, 368, 369
Out-of-door life, advantages of, 113–119
Ownership, farm, 215–220
land, significance of, 220–223

P

Pacific Coast states, agriculture in, 37
Parasites for destruction of plant pests, 148, 149
Parasitology, 148, 149
Patriotism, 282, 283
Pauperism in rural regions, 120, 121, 363–365
Peach production in United States, 46
Pear production in United States, 46
Peasant proprietors, 220–222
Personal characteristics developed by farm life, 131–133
Pests, elimination of, 148, 149
influence of, 26
Peterson, Frederick, on treatment of the insane, 374, 375
Physical conditions, agriculture and, 22–47
Physical defects of school children, 251
Physical differences between rural and city children, 280, 281
Physical environment, influence of, 22–27
limitations of, 26, 27
Physical labour in farming, 129, 130
Physical variation, community vigour and, 25, 26
Physiographic features of the United States, 27–34
Pioneer communities, 54–56
Plant life, influence of soil on, 31, 32
requirements of, 31, 32
Plant pests, elimination of, 148, 149
Play, organised, 278–281
in consolidated schools, 345
Plum production in United States, 46
Plunkett, Sir Horace, on farmers' organisations, 174
Polish immigrants, in agriculture, 71
Political influence of agricultural associations, 169, 172
Poor relief, 363–365
indoor, 363–365
needed legislation on, 370–372
outdoor, 368, 369
"Poor Whites," 74–76
Population, distribution of, according to physical features, 23, 24
foreign, of United States, 64–66, 89, 90
increase in rural and urban, 78–100
natural increase of, 86–88
possible, of United States, 209–211
relation of production to, 140–142
rural, 104
decline in, 79–83
urban, in United States, 19
urban, semi-urban, and rural, 10
Powell, on health and civilisation, 235
Power. *See* Motor power
Powers, L. G., on scientific agriculture, 231
Precipitation in United States, 29–31, 56, 57

Prices, farmer's and consumer's, 165–167
increase in, 139, 140
Pritchett, H. S., on colleges of agriculture and mechanic arts, 356
on need of rural leaders, 338
on socialisation of country children, 336
Probation system, 376, 377
Problem, city, 15
community, 15, 16
rural. *See* Rural problem
Producing areas of the United States, 35–37
Producing unit, size of, in town and country, 19, 20
Production, agricultural, improvement of, 135–153
increase in, 142, 143
organisation of factors of, 154–156
relation of, to population, 140–142
science applied to, 142–153
problems of, practical importance of, 138–142
Profits on agricultural commodities, distribution of, 166, 167
Progress, dependent on scientific methods, 24, 25
Prohibition. *See* Liquor question
Prune production in United States, 46
Prussia, rural credit in, 181–184
Psychological causes of city growth, 98, 99
Ptomaine poisoning, 245
Public lands, available in United States, 204
exhaustion of, 141
Public Roads Office, 198
Pumps, 239
Pure agricultural communities, 49–53
Putrefaction of food, 245

Q

Questionnaires on farm life, 111–113

R

Race strain, influence of, in community, 26
Raiffensen system of rural credit, 182–184
adaptability of, to America, 189
Rainfall in United States, 29–31, 56, 57
Rainwater, 240
Range region of United States, 36, 37
Rats, destruction of, 153
Ratzel, on health and civilisation, 235
Reading Circles, Young People's, 302
Reclamation of arid lands, 205
Reclamation law, 57
Recreation, promotion of, by association, 277. *See also* Clubs
Refuse, disposal of, 241–243
Registration of agricultural products, 170
Relief work, rural, 363, 364
Religion, social relationships of, 313
Reporting of farm products, 170, 171
Rest rooms for country women, 294
Retail prices, 139, 140
River valleys, 23
Roads, administration of, 200–203
construction of, 199, 200
economic function of, 195–197
improvement of, 197–303
due to rural mail service, 193, 194
influence of, on community life, 191, 192
social function of, 194, 195
superintendent of, 201
Rogers, Arthur A. L., on marketing, 162, 163
Rome, roads of, 191, 192
Roosevelt, Theodore, Country Life Commission appointed by, 102
on rural exodus, 284
on rural life, 8
Ross, on mob-mindedness in cities, 17, 18
Rotation of crops, 145
Rowdyism, 365
Rural charity and correction, 363–379
improvement of, 368–378

Rural charity—continued.
needed legislation on, 370–372
Rural church, decadence of, 316–320
functions of, 310–316
methods of improving, 320–322
socialisation of, 321, 322
Rural clergymen, 313, 314
social and economic training of, 320, 321
Rural communities, density of, 14, 15
distinction between urban communities and, 9–21
individual types developed in, 16, 17
mob spirit in, 17, 18
problems of, 15, 16
producing unit in, 19, 20
social backwardness of, 273–276
social mediation in, 11, 12
Rural credit, 79, 80, 176–190
adaptability of, to United States, 188–190
desirable principles of, 179–181
in France, 184–188
in Germany, 181–184
need of, 176–179
Rural death rate, 114–119
Rural dwellings in United States, 19, 20
Rural economics, 3, 4
Rural education, 327–362
sociological demands of, 327–330
special demands of, 333–344
See also Agricultural education and Rural schools
Rural health and sanitation, 235–255
Rural immigrant communities, 64–72
Rural leadership, consolidated schools and, 347, 348
dearth of, 106, 107, 287
education for, 338–342
Rural libraries, 301–303
Rural literature, 341
Rural mail service, 192–194
Rural migration, 274
city growth and, 89
interstate, 93, 94
relative decline in food production due to, 141, 142
significance and causes of, 94–100
Rural population, 104
decline in, 79–83
Rural problem, social nature of, 101–110
Rural recreation, 278
Rural school libraries, 302
Rural schools, 330–350
average daily attendance in, 331
buildings of, 333
consolidation of, 344–350
deficiencies of, 330–333
health and, 250–253
reorganisation of, 100
teachers in, 332, 333
training of, 348, 353, 354
Rural social centres, 304–308, 342–344
Rural social institutions, improvement of: the church, 310–326
clubs, 288–309
education, 327–362
Rural social problems, importance of, 6, 7
Rural social surveys, 380–391
ease of making, 384
nature of, 386–391
scheme for, 387–390
value of, 382, 383
Rural socialisation, 272–287
direction of, 283–287
Rural sociology, importance of, 4–8
scope and meaning of, 3, 4
Rural work of Y. M. C. A., 323–325

S

Safety devices for agricultural machinery, 233
Saloons. *See* Liquor question
Sanitation, fundamentals of, 236
and health, rural, 235–255
household, 238–249
neighbourhood, 249–253
state supervision of, in rural communities, 237, 238
San José scale, 148
Savings institutions, 232
Scarlatina, 248
School libraries, 302
Schoolhouses, rural, 333
Schools, agricultural trade, 357, 358

Schools—continued.
expenditures for, 332
health and, 250–253
high. *See* High schools
normal. *See* Normal schools
rural, 330–350
average daily attendance in, 331
consolidation of, 195, 344–350
deficiencies of, 330–333
reorganisation of, 100
as social centres, 342–345
See also Colleges and Universities
Schulze-Delitzsch system of rural credit, 182
Science, application of, to agricultural production, 142–153
city growth and, 97, 98
Scientific agriculture, 24, 25
effect of, on labour problem, 230, 231
in rural schools, 334
Scientific development, possibility of, in farm life, 125, 126
Scientific methods, advancement and, 136, 137
community progress dependent on, 24, 25
Schroeder, on unclean milk, 247
Scudder, Myron T., on physical development of country children, 281
Seasonal demand for labour, 225, 226, 228, 229
Sectarianism, 317
Senile dementia in country, 122
Sewage disposal, 242, 243
Shaler, on soils of New England, 33
Shipping rates, 163
Shrubs, 270
Silica content of soils, 34
Simmel, on social ideal, 256, 257
Slums, 120
Small fruits, production of, in United States, 44, 45
Smith, Adam, city defined by, 10
Social achievements, importance of, 135–137
Social aspects of labour in United States, 225–234
of land in United States, 204–225
Social backwardness of rural communities, 273–276
Social centres, rural, 304–308, 342–344
churches as, 315, 316
schools as, 342–345
Social conditions in corn raising communities, 51
in the cotton belt, 52, 53
in farm village communities, 63, 64
in frontier communities, 55, 56
in grain raising communities, 50
in irrigation communities, 60, 61
in mixed-agricultural communities, 54
among the Mountain Whites, 75, 76
Social deficiencies of rural life, 108, 109, 131
Social evil, absence of, in country, 120
Social evils, exemption from, in country life, 120–125
Social heredity, 48
Social institutions, rural, improvement of: the church, 310–326
clubs, 288–309
education, 327–362
Social isolation due to rural depopulation, 95, 96
Social mediation in city and country, 10, 11
Social nature of rural problem, 101–110
Social solidarity, promotion of, by association, 281–283
Social status of farmer, 105, 106
Social study in rural schools, 329, 336
Social surveys, city, 380–382
general, 385, 386, 387
kinds of, 384–386
partial, 385, 386, 387
practical, 386
rural, 380–391
ease of making, 384
nature of, 386–391
scheme for, 387–390
value of, 382, 383
scientific, 386

Social training of rural clergymen, 320, 321
Social unification, 315, 316
Socialisation of the church, 321, 322
of country life, 272, 273
direction of, 283–287
definition of, 272, 273
of school children, 336–338
Society of Equity. *See* American Society of Equity
Sociological demands of rural education, 327–330
Sociological implication of agriculture, 135–138
Soil, composition of, 31
improvement of, 144–148
influence of, 25
in New England, 32, 33
in United States, 31–34
Sombart, city defined by, 10, 11
Specialisation in rural education, 328, 329
Speculation in irrigated lands, 58, 59
Spellman, W. J., farm income estimated by, 155
Split log drag, 200
Spring water, 240
Spring wheat belt of United States, 35
Standardisation of agricultural production, 170
State boards of charities, 370
State Library Commissions, 303
State sanitary supervision in rural communities, 237, 238
Statistics, farm, 158–161
methods of collecting, 157, 160
Sterilisation of water, 241
Stern, on cultural value of association, 278
on improvement clubs, 288, 289
Stock raising, factors influencing, 38
in United States, 35–37
Stoves for schools, 253
Student opinions of farm life, 111–113
Sugar beet industry, labour supply in, 227, 228
Suicides in city and country, 122, 123
Surface water, 240
Surveys, social. *See* Social surveys
Swamp lands, drainage of, 205

T

Tape worm, 246
Taylor, H. C., on farm ownership, 218, 219
Teachers of agriculture, training of, 352
in consolidated schools, 347
rural, 332, 333
training of, 348, 353, 354
Telephones, social function of, 192, 194
Temperature, influence of, 25
in the United States, 27–29
Tenancy, farm, in United States, 178, 179
Tenant farming, 215–225
improvement of, 223–225
significance of, 220–223
Tests for soils, 146–148
Texas fever, 245
Toilet facilities, 263
Toilets, school, 253
Trade schools, agricultural, 357, 358
Tramps, 364, 365, 372
Transmissible diseases, 248, 249
in schools, 250–253
Transportation, agricultural organisation and, 170
and communication, improvement of, 191–203
farm marketing and, 163, 164
social and economic function of, 194–197
Travelling art exhibits, 303
Travelling libraries, 303
Trees, 270
Trichinosis, 246
Tuberculosis, milk supply and, 247
Typhoid fever, 242

U

Unimproved farm area, 206–209
United States, agriculture in, 4–6, 35–37, 142, 143
available arable land in, 204–206
average size of farms in, 19, 211–214

United States—continued.
co-operative movement in, 172–174
death rates in, 114–119
decline of rural population in, 80–83
distribution of cities in, 84
distribution of population in, according to physical features, 23, 24
European rural credit systems adaptable to, 188–190
farm tenancy in, 215–220
foreign population of, 64–66, 89, 90
immigration in, 64–72
improved and unimproved farm area in, 206–209
industrial statistics of, 20
infant mortality in, 246
major crop response in, 37–46
natural increase rate in, 86–88
physical conditions in, 22–47
physiographic features of, 27–34
possible population of, 209–211
precipitation in, 29–31, 56, 57
producing areas of, 35–37
retail prices in (1893–1911), 140
rural statistics of, 19, 20
social aspects of land and labour in, 204–234
soil in, 31–34
stock raising in, 35–37
temperature in, 27–29
urban population of, 19, 78, 79, 85–94
United States Bureau of Education, report of, on rural schools, 333
United States Department of Agriculture, investigations of, on rural credit, 176–178
work of, for road construction, 197, 198
United States Interstate Commerce Commission, 163
Universities, agricultural education in, 350, 351
extension work by, in agriculture, 358, 359
University of North Dakota. *See* North Dakota
Urban communities, rural communities distinguished from, 9–21. *See also* Cities
Urban death rate, 114–119
Urban population of United States, 19
increase in, 78, 79, 83–99. *See also* City growth.
Utah, farm villages of, 61–64
Utilities of home and farm, improvement of, 260–268

V

Vacuum cleaners, 265, 266
Vegetable crops in New England and Middle Atlantic states, 35
Vice in rural communities, 365–367
Villages, farm, 61–64

W

Water power, 260
Water supply, 239–241
possible population of United States and, 210
Wealth of agricultural classes, 104
Weed destruction, 153
Weidensall, Robert, rural work of Y. M. C. A. organised by, 323
Welfare agencies, county, 377, 378
Wells, 239, 240
Wheat, 38
spring, area of, in United States, 35
winter, area of, in United States, 35
Wheat areas in United States, 38, 39
Whooping cough, 248
Wilson, Warren H., on decadence of the rural church, 316, 317
on training of rural clergymen, 320, 321
Wind, influence of, 25, 26
Wind currents in United States, 30, 31
Wind power, 260, 261
Winter wheat belt of United States, 35

Women workers on the farm, 232
Women's clubs, 289, 292–295

Y

Yellow fever, 244
Young, on land ownership, 220
Young Men's Christian Association, rural work and, 322–325
Young people's clubs, 291, 292
Young people's institutes, 297
Young People's Reading Circles, 302

Z

Zinthes, C. J., on farm machinery as labour saver, 151

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